FACILITY NAME: ME Jackson
FACILITY ID NUMBER: 2248
1) DATE OF INSPECTION 7/30/09 CLASS 4 OK
FACILITY: CLOSED EMPTY? CLOSED OCCUPIED? _K
FOCCUPIED, BY WHOM? Phoenic USA Inc
ENVIRONMENTALIST <u>M&B</u> DATE ENTERED, INITIALS 13/09,40
2) DATE OF INSPECTION CLASS 4 OR 0
FACILITY: CLOSED EMPTY? CLOSED OCCUPIED?
IF OCCUPIED, BY WHOM?:
ENVIRONMENTALIST DATE ENTERED, INITIALS
3) DATE OF INSPECTION CLASS 4 OR 0
FACILITY: CLOSED EMPTY? CLOSED OCCUPIED?
IF OCCUPIED, BY WHOM?
ENVIRONMENTALIST DATE ENTERED, INITIALS
) DATE OF INSPECTION CLASS 4 OR 0
FACILITY: CLOSED EMPTY? CLOSED OCCUPIED?
IF OCCUPIED, BY WHOM?
ENVIRONMENTALIST DATE ENTERED, INITIALS
ATED DETAILED OOM CONTROL

ELKHART COUNTY GROUND WATER PROTECTION PROGRAM

	REGISTRATION AND INSPECTION FORM							
Facility Name RE Jackson Co Inc.	Facility I.D. Number 2248 Date 21100							
Address 53217 Marina Or	Contact Name Craig Gordon							
City EJKhart Zip 46514 Township	02 Phone Number 264-7557 NAICS 33232/							
	Additional Information: (check all that apply)							
	Hazardous Waste Inspected: SQG LQG TSD Unknown							
1	SARA Title III: Emergency Planning (EHS)							
Reinspection	Toxic Chemical Release Reporting							
Complaint \square Other \square	Community Right-To-Know Requirements							
	Unknown							
Registration Exemption: (check all that apply)								
No on-site wastewater disposal system	Posala of impropried products							
1 • • • • • • • • • • • • • • • • • • •	Resale of unopened products							
Store < 100 kg/mo. of hazardous/toxic substances	Laboratory							
	Water Protection Ordinance 99-250. All violations should be corrected as soon as possible,							
	re to comply may result in the assessment of fines. Prior to the indicated compliance time							
Elkhart Road, Goshen, IN, 46526, (219) 875-3391.	ding this inspection may be directed to the Elkhart County Health Department, 4230							
	Outside Storage of Hazardous/Toxic Substances							
Registration (6.4.)	10 Character of Hazardous Toxic Substances							
11 Registered on-site wastewater disposal systems (5.A.)	19 Storage on an impervious underlying base (RR 4.A.)							
(Immediate compliance)	(7 days to comply)							
System 1: Type Septic Flow	20 Storage in a containment system with adequate capacity							
System 2: Type Septic Flow	(RR 4.A.) (14 days to comply)							
System 2: Type <u>Septic</u> Flow	21 Proper maintenance of containment system to protect							
Location (Ruck of Blog	integrity and capacity (RR 4.A.) (14 days to comply)							
System 3: Type Flow	22 Proper removal or disposal of spilled material and							
Location	accumulated precipitation (RR 4.A.) (7 days to comply)							
System 4: TypeFlow	23 Storage in product-tight containers (RR 4.C.)							
Location	(7 days to comply)							
Contain St Toma	24 Controlled drainage of precipitation in the containment							
System 5: Type Flow								
Location Flow	system (RR 4.D.) (7 days to comply)							
	25 Storage in secondary containment (RR 4.A.)							
Location	(14 days to comply)							
12 Registered hazardous/toxic materials storage area (5.B.)	Temporary Storage Areas							
(Immediate compliance)	26 Storage on an impervious underlying base (RR 4.H.)							
13 Notified ECHD of changes to on-site wastewater	(7 days to comply)							
disposal system or hazardous/toxic substances storage	27 Storage does not exceed two (2) business days (RR 4.H.)							
area (RR 2.C., RR 2.D.) (Immediate compliance)	(2 days to comply)							
	28 Spill response plan (RR 4.H.) (7 days to comply)							
On-site Wastewater Disposal System	<u>Spills</u>							
14 Furnished a wastewater characterization for each on-	29 Spill of a toxic or hazardous substance (4.)							
site wastewater disposal system (6.) (30 days to comply)								
Inspections	30 Discharge of process wastewater into or above an aquifer							
15 Upon notice of a violation, correct the violation as	(4.) (Immediate compliance)							
requested (12.B.) (Immediate compliance)	31 Reportable spill due to quantity requirements (10.A. and							
16 Provided requested information to determine compliance	10.C.) (Immediate compliance)							
with ordinance (13.C.) (Immediate compliance)	32 Reportable spill damaging waters of the state (10.A. and							
	10.C.) (Immediate compliance)							
Indoor Storage of Hazardous/Toxic Substances	33 Reportable spill due to no spill response (10.A.)							
17 Toxic/hazardous substances located in a manner to preven	nt a (Immediate compliance)							
spill onto the ground (RR 4.B.) (7 days to comply)	34 Undertake spill response activities (10.C.)(7 days to comply)							
18 Toxic/hazardous substances located in a manner to preven	nt							
a spill into a drain that is connected to an on-site wastewa								
disposal system (RR 4.B.) (7 days to comply)								
	1. 1. 1.							
Follow-up Action: Reinspection on or about//_	Received by: Orang Abrilon							
Routine (Priority Category) 1 (2) 3 0	1 01/408/11							
Troutino (Triotity Suicesory) 1 (2) 3 0	Inspected by: Christic Mells							
*Compliance with the Elkhart County Ground Water Protection Ordinance	does not exempt this facility from any							

other federal, state or local laws, codes or regulations.



ELKHARTY COUNTY GROUND WATER PROTECTION PROGRAM TOXIC OR HAZARDOUS SUBSTANCE STORAGE AREAS REGISTRATION INFORMATION

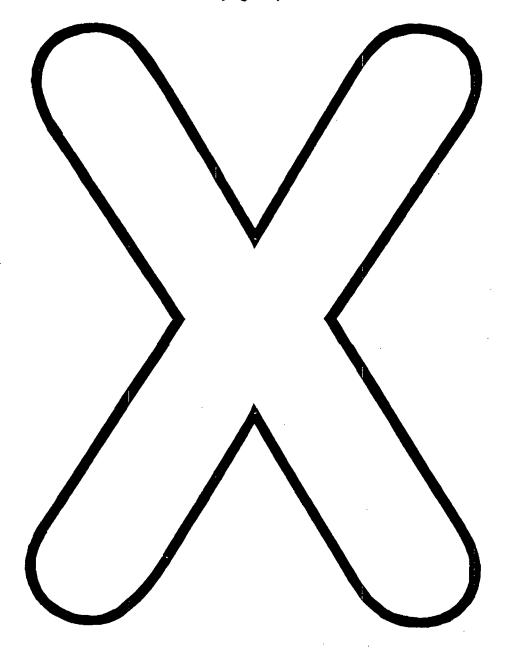
FACILITY NAME RE Jackson Co Inc FACILITY ID NUMBER 01000 2248

Hazardous Substance		Ty	pe o	f Co	nta	iner	•	Maximu				orage cation	D	ate
	D	В	C	A	T	U	0	Stored In	Any M	onth	Inside	Outside	Added	Deleted
Tooltex	χ							275	gals	lbs	У		2/11/00	
MEK			X					16	gals	lbs	×		21100	
Window Cleaner	X							110	als	lbs	ĸ		2)11/00	i
Scotch-Seal	-		×					. 10	gals	lbs	×		2/11/00	
Xylene			X					5	gals	lbs	×		2/11/00	<u> </u>
ISOPPONI Alcohol			X	<u></u>				55	gals	lbs	×		2/11/00	:
Naphtha Buckeye Degreaser Hydraulic Cil Waste Oil			X					5	gals	lbs	×		2/11/00	!
Buckeye Degreaser	X							55	gals	lbs	×		21100	<u> </u>
Hydraulic (i)		X				_		. 10	gals	lbs	×′		2/11/00	
Waste oil	_	Y						5	gals	lbs	×		211100	
Paints			×			ļ		10	gals	lbs	×		211/00	
Paints Degressing Tank				X				100	gals	lbs	*		2/11/00	
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GROUND WATER PROTECTION ORDINANCE INSPECTION FORM

ID NUMBER 2248	DATE / /5/99	PAGE / OF 2_
BUSINESS NAME Re Jackson Co Inc	, ,	
ADDRESS 53217 Marina Dr	Elkhart	ZIP 46514
PHONE NUMBER 264-7557 CONTACT	r name Craig Gor	don
CHECK ALL APPLICABLE: [SEPTIC [] DRYWELL [] CITY SEWER	[] OTHER	
M FLOOR DRAINS underneath Water test	-booth for windows	
[⋈ STORAGE OF HAZARDOUS OR TOXIC SUBSTI	ANCES (SEE INVENTORY)	
[X] WASTE WATER CHARACTERIZATION PROVIDE	ed / Next due 2/24	000
EXEMPTIONS: [] REGISTRATION [] W.W.C.	. CLASS NEXT	INSPECTION 1/200
CODE INV.# VIOLATION	COMPLIANCE TI	ME/DATE COMPLETED
No violations		
-X Note - adhesive should	be	:
In secondary containmen	<u>+ </u>	
or inside when in a li	iquid	
phase	1	
Z	rue	
		·
Chartee & Stelle	Prin Fordon	
ENVIRONMENTALIST	FACILITY CONTACT I	PERSON
REINSPECTION DATE	INITIALS	

*COMPLIANCE WITH THE ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE DOES NOT EXEMPT THIS FACILITY FROM ANY OTHER FEDERAL, STATE OR LOCAL LAWS, CODES OR REGULATIONS.

1/92 AVT 4/94 12/94 REV/REW

ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE HAZARDOUS/TOXIC SUBSTANCE INVENTORY

page 2 of 2

company name <u>Re Jack</u>	sox Co, Inc			Date//	5/99
SUBSTANCE	LOCATION	AMT	CPCTY	CONTAINER	COMPLY
1. Attore Wask Toolky	insido - Subck room	_/_	55 gal	drum	·
2. Scotch-Grip - Allen					<u> </u>
3. MEK-Wisk	Outside - in metal box		Sgal	Metal	<u> </u>
4. Glass Cleaner	Inside - near clean row	en 2	309W	photic	<u> </u>
5. Scotch Scal- Metal Scalar			,	•	
6. Naphtha	1'-hear clean room	4	•		<u>/</u>
7. Isopropanol	"-nearclean room				4
8. Scotch-grip adhesive			,		<u> </u>
9. Xylene	11 -nearclean non		,		4
10. Tooltex	11 - Degreening Ar		, ,		
11. Degreaser	- Negreasing A				\searrow
12. Degreering Tank					<u> </u>
13. Hydreulie 61/					*
14. Waste 01/	11 - maintenance	- 1	Sgal	plastic	Y
15. Various Paints	" - Masuknana				Y
16. Hydraulic oil	//		•		Y
16.		· · · · · · · · · · · · · · · · · · ·			
18.					
19.			•		
20.	· · · · · · · · · · · · · · · · · · ·				
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23					
24.————					
25.					
26.					 .

ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE INSPECTION FORM

3-10-97

ID NUMBER <u>GW-2248</u>	DATE	3-4-90	PAGE / OF Z
BUSINESS NAME RE Jackson			
ADDRESS 53217 Maring Dr	. E	Tkhort	ZIP 46514
PHONE NUMBER 264-7557	CONTACT NAME_	Craig bo	ordon
CHECK ALL APPLICABLE: [X] SEPTIC [] DRYWELL [] CITY		~	
[X] FLOOR DRAINS from Later Le	est book	tor windows	5
[X] STORAGE OF HAZARDOUS OR TOXIC	SUBSTANCES	(SEE INVENTOR!	Y) /
[X] WASTE WATER CHARACTERIZATION	PROVIDED / NE	EXT DUE $\frac{Z}{}$	2000
EXEMPTIONS: [] REGISTRATION []	W.W.C. CLAS	ss next	INSPECTION 3/199
code inv. # Violation 54 6,8 Dutside Storage L	Hont	compliance T: $4-4-90$	IME/DATE COMPLETED
secondary contains	nert.		
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311/18/_		Prais Hordo	~
ENVIRONMENTALIST	FACI	LLITY CONTACT	PERSON
REINSPECTION DATE		INITIALS	not

*COMPLIANCE WITH THE ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE DOES NOT EXEMPT THIS FACILITY FROM ANY OTHER FEDERAL, STATE OR LOCAL LAWS, CODES OR REGULATIONS.

1/92 AVT: 4/94 12/94 REV/REW

ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE HAZARDOUS/TOXIC SUBSTANCE INVENTORY

PAGE ZOF 2

company name KE	Jackson		Date	3-4-97
SUBSTANCE 1. Wake Soluble Degresse	LOCATION Thside-Diggs	, 11 ,	pcty contai	١/
2. Cooling Oil-Tooltex	11 11		598/ dru	1/
3. Degressing tanks	in 10		5000 AS	TY
4. Hydraulic oils	Juside - Mains		Saal other	VY
5. Various paints	11 //	15	Iss ofle	v Y
6. Waste Tooltex	Outside - nort	K 15	Sast drum	n N
7. Waste MEK			5351 drue	<u>~ /</u>
8. Unknown waste	<u> </u>	<u> </u>	5594 drus	ns N
9. Glass Cleaner	Inside-New Cle	1 5 Rm 1 5	Deal drui	\sim V
10. Adhesive	1. 11	<u> </u>	sel other	v y
11. Isopropanol	Inside, "	abinet 1	sal offe	<u>/ // :</u>
12. Naphtha		<u>//_</u>	igal often	v Y
13. MEK	"	1	ssl of	/
14. Adhesive		<u>′ 2</u> <u>2</u> <u>5</u>	sel ofle	Le Y
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ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE INSPECTION FORM

2-6-95

ID NUMBER	GW-2248		DATE	1-94	PAGE 1 OF 2
	AME RE Jack		DRII	,	OF
	-		at 701)000-1/1
	2217 Marina		/ /		ZIP 46514
PHONE NUMBI	er 164-7557	CONTAC	T NAME SUC	Miley	
CHECK ALL 2	APPLICABLE: [] DRYWELL	[] CITY SEWER	[] OTHER_	12 system	165J
	drains water f				
	E OF HAZARDOUS				
[] WASTE	WATER CHARACTER	IZATION PROVID	ED / NEXT DUI	2/95	(VOC composites
	: [] REGISTRAT				I
CODE INV.;	# VIOLATION 12 materiels 3 without sea	stored outside	COMPLI 12-	ANCE TIME	/DATE COMPLETED 2-3-75
Deep.	1 Danie		X Su	nas M	Coy
	NMENTALIST		FACILITY (rson
PETNSPI	ECTION DATE		TN	TIALS	

^{*}COMPLIANCE WITH THE ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE DOES NOT EXEMPT THIS FACILITY FROM ANY OTHER FEDERAL, STATE OR LOCAL LAWS, CODES OR REGULATIONS.

ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE HAZARDOUS/TOXIC SUBSTANCE INVENTORY

page 20f2

company name RE J	ackson			Date//	1-94
SUBSTANCE	LOCATION	AMT	СРСТУ	CONTAINER	COMPLY
1. degreaser	inside - west well	2	55gol	dun	<u>Y</u>
2. machine oil	inside - west well	2_	Sgal	dnm	Υ
3. tapping fluich	ic (C)		5gal	Ther	<u> </u>
4. machine oil	inside - ast wall	2	5372	other	<i>y</i>
5. Spolant	inside- eastwell	6	SEJOS	other	
6. MEK	hie abiret - son well	4		other	
7. Akptha	, (C)	/		other	7
8. adlusive	n, ve	2	-0	other	Y
9. "prestex" (flummade)	inside-soth wall	./	0	OTher	Y
10. Logicagi	outside-north side	• /		dNM	N
11. ME/C	1 "1	2	5 91		N
12. MEK wiste	11 4	_	55gcl		7
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9-30-93

ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE INSPECTION FORM

ID NUMBER	2248 DAT	E 1-28-93	PAGE/_OF
	ME RE Jackson Co. Inc		
ADDRESS	3217 Marina Dr FIKH	art, IN	ZIP 46514
PHONE NUMBE	R 264-7537 CONTACT NAM	E Chaz Rizz	ව
CHECK ALL A	[] DRYWELL [] CITY SEWER []	OTHER [25,	stm)
[/] FLOOR D	rains water Lst for windows		
[STORAGE	OF HAZARDOUS OR TOXIC SUBSTANCES	(SEE INVENTORY)
[] WASTE W	ATER CHARACTERIZATION PROVIDED /	NEXT DUE	·
EXEMPTIONS:	[] REGISTRATION [] W.W.C. [NONE	
CODE INV.#	VIOLATION /	COMPLIANCE TI	ME/DATE COMPLETED
B <u>ZZ </u>	Storage Sheet has unscaled floor	2-28-93	2-26-93
<u> </u>	no wastewake characterization provided *	4-28-93	4-13-93
* (3) U	OC analysis required for:		
	(1) sephi systm #1		
	(2) Eaphl system #2 (3) "water test" discharge		
Staff	leg aborne	X Minten	Reggo
ENVIRON	MENTALIST FA	CILITY CONTACT	PERSON
DETMODE	COTON DAME	THITMINIC	

^{*}COMPLIANCE WITH THE ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE DOES NOT EXEMPT THIS FACILITY FROM ANY OTHER FEDERAL, STATE OR LOCAL LAWS, CODES OR REGULATIONS.

ELKHART COUNTY GROUND WATER PROTECTION ORDINANCE HAZARDOUS/TOXIC SUBSTANCE INVENTORY

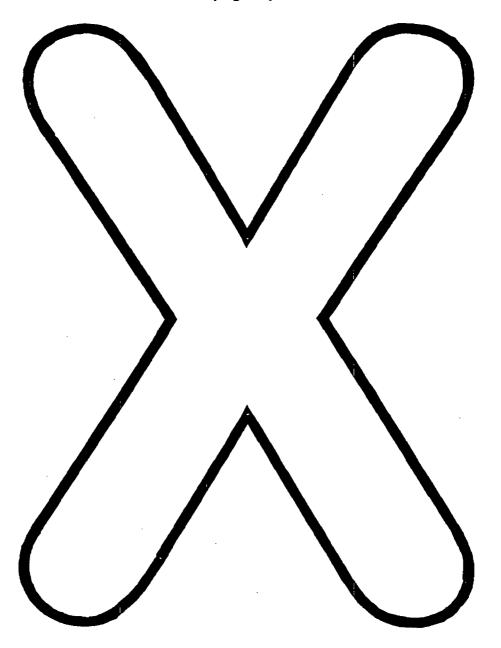
page 2 of 2

company name RE	Jackson	·			
SUBSTANCE	LOCATION	AMT	CPCTY	CONTAINER	COMPLY
1. Jolkx Solible oil	inside-production area		Signal		
2. degreeser (56 34920 770 354	inside-prodution area	2	Spal		<u> </u>
Cas # 3 2 2324338					
4. 1/aptha	Safty cabinet		Stal	steel	4
•	h 11	. 	- Sal	Steel	Y
5. <u>MEK</u>	11 11	~			V
6 Motal sastant		. <u>_/</u>	- Sul	Steel	· //
7. adhesire		/	- 551L	steel .	· /
8. Wask MEK/Oil	outside-storage shed		30gal	5/00/	N
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Multi-Page Separator Sheet

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Safety & Environmental Resources, Inc.

1122 DIVISION ST. P.O. BOX 1308

MISHAWAKA, IN 46546-1308

PHONE: (219) 258-0507 (219) 674-0450

FAX:

(219) 258-0370

OSHA/EPA Training & Consulting

DAN WILSON PRESIDENT

DAN SCHROEDER **GENERAL MANAGER:**

Waste Qil/Water Processing Specialty Products

LABORATORY REPORT

CLIENT:

R. E. Jackson

ATTN:

Ed Smoker

53217 Marina Drive Elkhart IN 46514-9586

PROJECT/SITE:

GWPO Wastewater Characterizations

REPORT: A0321-3

SAMPLES SUBMITTED: Three

liquid sample(s) for individual

VOC analysis.

COLLECTED:

3-26-93

BY:

RF/CR

RECEIVED: 3-31-93

REPORT SUMMARY:

Volatile Organic Compounds (VOCs) are analyzed by a Gas Chromatograph (GC) using the EPA approved method 8021.

A purge and trap system is utilized to separate the VOCs from the sample matrix and introduce the VOCs into the GC. VOC detection is accomplished by an Electrolytic Conductivity Detector (ELCD) and a Photoionization Detector (PID). Purging of known standards are interpreted by the ELCD/PID in order to identify the target compounds.

The detection limits of this method is 1.0 parts per billion (ppb).

Detailed results of the analysis are presented on the following page.

If you have any questions or comments concerning this report, please do not hesitate to call us at (219) 258-0507.

ANALYTICAL RESULTS

CLIENT: R.E. Jackson
ANALYSIS DATE: 4/1/93
SAMPLE DESCRIPTION: Septic 1 (East) A0321 #/

Volatile Organic Compound	DL ug/L	Results	Volatile Organic Compound	DL ng/L	Result
Benzene	1	N.D.	2,2-Dichloropropame	1	N.D.
Bromobenzene	1	N.D.	1,1-Dichloropropeme	1	N.D.
Bromochioromethane	1	N.D.	cis-1,3-Dichloropropene	1	N.D.
Bromodichloromethane	1	N.D.	trans-1,3-Dichloropropene	1	N.D.
Bromoform	1.6	N.D.	Ethylbenzene	1	N.D.
Bromomethane	1.1	N.D.	Hexachlorobutadiene	1	N.D.
n-Butylbenzene	1	BDL	lsopropylbenzene	1	BDL
sec-Butylbenzene	1 0	11.1	p-Isopropyltoluene	1	BDL
tert-Butylbenzene	1	N.D.	Methylene Chioride	1	N.D.
Carbon Tetrachloride	1	N.D.	Naphthalene	1	N.D.
Chlorobenzene	1	N.D.	n-Propylbenzene	1	N.D.
Chloroethane	1	N.D.	Styrene	1	N.D.
Chloroform	i	N.D.	1,1,1,2-Tetrachloroethane	1	N.D.
Chloromethane	1	N.D.	1,1,2,2-Tetrachloroethane	1	N.D.
2-Chiorotoluene	i	N.D.	Tetrachloroethene	1	N.D.
4-Chlorotoluene	1	N.D.	Toluene	1	N.D.
Dibronomethane	1	N.D.	1,2,3-Trichlorobenzene	1	N.D.
1,2-Bibromo-3-Chloropropane	3	N.D.	1,2,4-Trichlorobenzene	1	N.D.
1,2-Dibromoethane	1	N.D.	1,1,1-Trichloroethame	i	N.D.
Dibromomethane	2.2	N.D.	1,1,2-Trichloroethane	1	N.D.
1,2-Dichlorobenzene	1	N.D.	Trichloroethene	1	N.D.
1,3-Dichlorobenzene	1	N.D.	Trichlorofluoromethane	1	W.D.
1,4-Dichlorobenzene	1	BOL	1,2,3-Trichloropropane	1	N.D.
Dichlorodifluoromethane	1	N.D.	1,2,4-Trimethylbenzene	1	(1.10)
1,1-Dichlorethane	1	N.D.	1,3,5-Trinethylbenzene	1	N.D.
1,2-Dichlosethane	1	N.D.	Vinyl Chloride	1	N.D
1,1-Dichloroethene	i	N.D.	m&p-Xylenes	1	BDL
cis-1,2-Dichoroethene	i	N.D.	o- Xylenes	1	N.D.
trans-1,2-Dichloroethene	1	N.D.			
1,2-Dichloropropane	1	N.D.			
1,3-Dichloropropane	1	N.D.			

Comments:

DL - Detection Limit
N.D. - Not Detected
BDL - Below Detection Limits
ug/L - Parts per Billion
* mg/L - Parts per Millon

ANALYTICAL RESULTS

CLIENT: R.E. Jackson ANALYSIS DATE: 4/1/93

SAMPLE DESCRIPTION: Septic 2 (Northwest) A0322#2

Volatile Organic Compound	DL ug/L	Results	Volatile Organic Compound	DL ng/L	Result
Веплеле	1	N.D.	2,2-Dichloropropane	1	N.D.
Bromobenzene	1	N.D.	1,1-Dichloropropene	1	N.D.
Bromochloromethane	1	N.D.	cis-1,3-Dichloropropene	1	N.D.
Bromodichloromethane	1	N.D.	trans-1,3-Dichloropropene	1	N.D.
Bromoform	1.6	N.D.	Ethylbenzene	1	N.D.
Bromomethane	1.1	N.D.	Hexachlorobutadiene	1	N.D.
n-Butylbenzene	1	N.D.	Isopropylbenzene	1	N.D.
sec-Botylbenzene	1	BDL	p-Isopropyltoluene	1	BDL
tert-Butylbenzene	1	N.D.	Methylene Chloride	í	N.D.
Carbon Tetrachloride	1	N.D.	Naphthalene	1	N.D.
Chlorobenzene	1	N.D.	n-Propylbenzene	1	N.D.
Chloroethane	1	N.D.	Styrene	1	N.D.
Chioroform	1	BDL	1,1,1,2-Tetrachloroethame	1	₩.D.
Chioromethane	1	N.D.	1,1,2,2-Tetrachloroethame	1	N.D.
2-Chlorotoluene	1	N.D.	Tetrachloroethene	1	N.D.
4-Chlorotoluene	1	N.D.	Toluene	1	₹ 2.45
Dibromomethane	1	N.D.	1,2,3-Trichlorobenzene	1	N.D.
1,2-Dibromo-3-Chloropropane	3	N.D.	1,2,4-Trichlorobenzene	1	N.D.
1,2-Dibromoethane	1	N.D.	1,1,1-Trichloroethane	1	N.D.
Dibromomethane	2.2	N.D.	1,1,2-Trichloroethane	1	N.D.
1,2-Dichlorobenzene	. 1	N.D.	Trichloroethene	1	N.D.
1,3-Dichlorobenzene	1	N.D.	Trichlorofluoromethane	1	M.D.
1,4-Dichlorobenzene	i	BDL	1,2,3-Trichloropropane	1	N.D.
Dichlorodifluoromethane	1	N.D.	1,2,4-Trimethylbenzene	1	N.D.
1,1-Dichlorethane	1	N.D.	1,3,5-Trimethylbenzene	1	N.D.
1,2-Dichlorethane	1	N.D.	Vinyl Chloride	1	N.D
1,1-Dichloroethene	1	N.D.	m&p-Xylenes	1	N.D.
cis-1,2-Dichoroethene	1	N.D.	o- Xylenes	1	N.D.
trans-1,2-Dichloroethene	1	N.D.			
1,2-Dichloropropane	1	W.D.			
1,3-Dichloropropane	1	N.D.			

Comments:

DL - Detection Limit
N.D. - Not Detected
BDL - Below Detection Limits
ug/L - Parts per Billion
* mg/L - Parts per Millon

ANALYTICAL RESULTS

CLIENT: R.E. Jackson
ANALYSIS DATE: 4/1/93
SAMPLE DESCRIPTION: Plant 2 Water Discharge A0323

Volatile Organic Compound	DL ug/L	Results	Volatile Organic Compound	DL ng/L	Result
Benzene	1	N.D.	2,2-Dichloropropane	1	N.D.
Bromobenzene	1	N.D.	1,1-Dichloropropene	1	N.D.
Bronochloromethane	1	N.D.	cis-1,3-Dichloropropene	i	₩.D.
Bromodichloromethane	1	N.D.	trans-1,3-Dichloropropene	1	N.D.
Bromoform	1.6	N.D.	Ethylbenzene	1	N.D.
Bromomethane	1.1	N.D.	Hexachlorobutadiene	1	W.D.
n-Butylbenzene	1 1	2.34	Isopropylbenzene	1	BDL
sec-Butylbenzene	1	C 5.57 T	p-Isopropyltoluene	1	BDL
tert-Butylbenzene	1	(4,41)))	Methylene Chloride	1	N.D.
Carbon Tetrachloride	1	N.D.	Naphthalene	1	BDL
Chlorobenzene	1	N.D.	n-Propylbenzene	1	W.D.
Chloroethane	1	N.D.	Styrene	1	N.D.
Chloroform	1	N.D.	1,1,1,2-Tetrachloroethane	1	N.D.
Chloromethane	1	N.D.	1,1,2,2-Tetrachloroethane	1	N.D.
2-Chlorotoluene	1	N.D.	Tetrachloroethene	1	N.D.
4-Chiorotoluene	1	N.D.	Toluene	1	N.D.
Dibromomethane	1	N.D.	1,2,3-Trichlorobenzene	1	N.D.
1,2-Dibromo-3-Chloropropane	3	N.D.	1,2,4-Trichlorobenzene	1	N.D.
1,2-Dibromoethane	1	N.D.	1,1,1-Trichloroethame	1	BDL
Dibromomethane	2.2	N.D.	1,1,2-Trichloroethane	1	W.D.
1,2-Dichlorobenzene	1	N.D.	Trichloroethene	1	N.D.
1,3-Dichlorobenzene	1	N.D.	Trichlorofluoromethane	1	N.D.
1,4-Dichlorobenzene	1	N.D.	1,2,3-Trichloropropane	1	N.D.
Dichlorodifluoromethane	1 (5.48	1,2,4-Trimethylbenzene	1	C4.65
1,1-Dichlorethame	1	5.65	1,3,5-Trimethylbenzene	1	€ 4.88
1,2-Dichlorethame	1	N.D.	Vinyl Chloride	1	N.D
1,1-Dichloroethene	1	N.D.	m&p-Xylenes	1	€ 2.27
cis-1,2-Dichoroethene	1	N.D.	o- Xylenes	1	N.D.
trans-1,2-Dichloroethene	1	N.D.			
1,2-Dichloropropane	1	N.D.			
1,3-Dichloropropane	1	BDL			

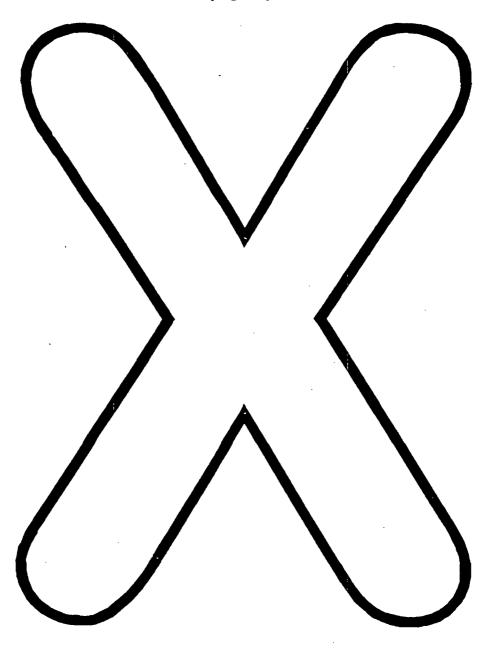
Comments:

DL - Detection Limit
N.D. - Not Detected
BDL - Below Detection Limits
ug/L - Parts per Billion
* mg/L - Parts per Millon

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Elkhart County Ground Water Protection Ordinance REGISTRATION FORM

(see back for directions)

SECTION I		GENER	AL INFORMATION		
Α.	NAME OF BUSINESS	RE Jackson	Co, Inc		
		Marina Dr	· .		
	CITY EIKHART	IN	ZIP CODE	386	
• • • •	TOWNSHIP OSO/C	>		· .	
В.	Chie Dinas 264-7557				
	ALTERNATE PHONE				
C.	Are you RCRA inspected?	YESNOi	YES when was the last inspecti	on	
D.	Has CERCLA (SARA Tit	le III) information been	provided to Elkhart County? X	ESNO	
	OWNER/REPRESENTAT		Market Tras	DATE 1-28-93	
SECTION II	·	N-SITE WASTEWAT	ER DISPOSAL REGISTRATI	ION	
А. Туре	В.	Purpose	C. Location	D. Estimated Flow	
1. 5002	Secrife		Front bldg	88 employees	
1. 5-st. 2	¥.50		rear blda		
8. <u>8/11) =</u>	- ang		7 277 0149		
SECTION III		STORAGE OF TOXI	C OR HAZARDOUS SUBSTA	NCES	
A. Subst	ance B. Class	C. Maximum Amount	D. Location	E. Type of Container	
					
		·			

SECTION I

GENERAL INFORMATION

- A. Name of facility, address, city, zip code
- B. Contact person at facility, phone number, alternate phone number
- C. Does your facility fall under the Resource Conservation and Recovery Act, and are you subject to RCRA inspections? When was the last time you were inspected, if you haven't been inspected, indicate that you have not been.
- D. Indicate if Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) information has been provided to the County. If it has, only fill in Section I & II.

SECTION II

ON-SITE WASTEWATER DISPOSAL REGISTRATION

- A. Identify all on-site wastewater disposal systems discharging into the ground. These include such systems as: septic, dry wells, unlined lagoons, oil-water separators or other field absorption systems. Please list each one separately.
- B. Identify the purpose of the disposal system such as, sewage, cooling water, etc. Also indicate if any process wastes or chemicals discharge to this system and identify them.
- C. Identify the location of each system as closely as possible. Example:

Septic system 50' south of south west corner and 20' west

of south west corner of building 2.

It may help to attach a drawing.

D. Determine the flow rate to each system in gallons per day. Most systems will normally have been determined when they were designed. Refer to the engineering plans possibly in your files. We may be able to help you with this information.

SECTION III

STORAGE OF TOXIC OR HAZARDOUS SUBSTANCES

- A. Identify each type of hazardous substance as defined in the Elkhart County Ground Water Protection Ordinance (summary attached). These substances include any materials defined in Section 101 (14) of CERCLA, petroleum (including crude oil or any fraction thereof) which is liquid and standard conditions of temperature and pressure (60 fahrenheit and 14.7 pounds per square inch absolute), radioactive and infectious substances as defined by any applicable local, state or federal law or regulation.
- B. Classify each substance as:

Ignitable = combustible, flammable or explosive

Corrosive = dissolves material or burns skin

Reactive = unstable, undergoes rapid or violent chemical reaction with water or other material

Toxic = any substance defined in Section 101 (14) of CERCLA

- C. Indicate the maximum amount of the substance at any given time.
- D. Identify the location (as close as possible) and surface material where the substance is stored. (May use back or provide diagram.)
- E. Identify the type of container in which the substance is stored. Example:

Covered 55 gallon metal drum.



4230 Elkhart Road U.S. 33 & C.R. 26 Goshen, Indiana 46526 (219) 875-3391

Frederick W. Bigler, M.D. Health Officer

April 19, 1993

Mr. Christopher Rizzo RE Jackson Company, Inc. 53217 Marina Drive Elkhart, IN 46514-9586

Dear Mr. Rizzo:

The purpose of this correspondence is to discuss with you a concern of this department regarding a discharge into the septic system on the east side of your facility.

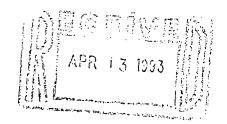
During our initial inspection of January 28, 1993, it was discovered that this septic system was receiving a regular discharge from a degreaser tank located in your facility. Although subsequent testing of this discharge revealed relatively low contaminant levels, under rules adopted by the Indiana State Board of Health (410 IAC 6-10-2 and 6-10-3), it is illegal to dispose of process wastewaters into septic systems.

It is our recommendation that you find an alternate means of disposing or recycling of this wastewater. Your attention to this matter, we feel, will prevent possible groundwater contamination and/or legal liability in the future. Your cooperation in this matter is appreciated.

Sincerely,

Geoffrey S. Downie Environmentalist II

GD/di



April 12, 1993

Mr. Geoffrey S. Downie, Environmentalist II Elkhart County Health Department 4230 Elkhart Road Goshen, IN 46526

Dear Mr. Downie:

Enclosed are results from VOC analysis. This analysis was performed to comply with the Ground Water Protection Ordinance inspection done on 1/28/93.

If you require any further information, please advise me.

Sincerely,

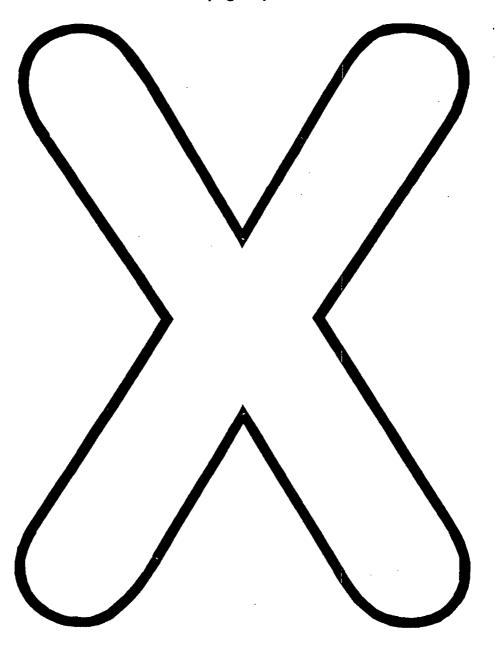
Christopher Rizzo Personnel Director

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R.E. JACKSON COMPANY, INC.

March 3, 1995

Mr. Geoffrey S. Downie, REHS Environmentalist III Environmental Health Services Elkhart County Health Department 4230 Elkhart Road Goshen, IN 46526

Dear Mr. Downie:

Enclosed are the results from the VOC analysis.

If you require any further information, please let us know.

Sincerely,

Susan E. McCoy Safety Director

/m

encl.

Safety & Environmental Resources, Inc.

14009 JEFFERSON BLVD. P.O. BOX 1308

MISHAWAKA, IN 46546-1308

PHONE: (219) 258-0778 24 HOUR PHONE: (219) 258-0507 FAX: (219) 258-4748 SER Oil Services

DAN WILSON PRESIDENT

DAN SCHROEDER EXECUTIVE VICE PRESIDENT

SER Oil Services
Waste Oil/Water Processing
Specialty Products

TRACE ID: K034-01 REPORT DATE: 02/21/95 ANALYSIS DATE: 02/13/95

ANALYST: gmr

CLIENT ID: R.E. Jackson

SAMPLE DATE: 01/31/95 SAMPLE RECEIVED: 02/07/95

SAMPLE RECEIVED: 02/07, SAMPLE TYPE: Water

SAMPLE TYPE: wate

SAMPLE ID: Test Chamber A0341

RESULTS (ug/L) EPA 8260 VOLATILES Benzene <1 Bromodichloromethane <1 Bromoform <1 <1 Bromomethane Carbon tetrachloride <1 Chlorobenzene <1 Chloroethane <1 <10 2-Chloroethylvinyl ether <1 Chloroform <1 Chloromethane Dibromochloromethane <1 < 1 1,3-Dichlorobenzene <1 1,2-Dichlorobenzene 1,4-Dichlorobenzene 20 <1 1,1-Dichloroethane 1.0 1,2-Dichloroethane <1 1,1-Dichloroethene trans-1,2-Dichloroethene <1 <1 1,2-Dichloropropane < 1 cis-1,3-Dichloropropene trans-1,3-Dichloropropene <1 <1 Ethyl benzene 43 Methylene chloride 1,1,2,2-Tetrachloroethane <1 1.5 Tetrachloroethene 5.7 Toluene 1,1,1-Trichloroethane <1 <1 1,1,2-Trichloroethane <1 Trichloroethene <1 Trichlorofluoromethane <1 Vinyl chloride <3 Xylenes

Safety & Environmental Resources, Inc. OSHAJEPA Training & Consulting

14009 JEFFERSON BLVD. P.O. BOX 1308 MISHAWAKA, IN 46546-1308

(219) 258-0778 PHONE:

24 HOUR PHONE: (219) 258-0507 FAX: (219) 258-4748 FAX:

DAN WILSON PRESIDENT

DAN SCHROEDER EXECUTIVE VICE PRESIDENT

Waste Oil/Water Processing Specialty Products

> K034-01 TRACE ID: REPORT DATE: 02/21/95 02/13/95 ANALYSIS DATE:

ANALYST: gmr

CLIENT ID: R.E. Jackson SAMPLE DATE: 01/31/95

02/07/95 SAMPLE RECEIVED:

SAMPLE TYPE: Water

SAMPLE ID: Septic Tank #1 A0342

km SAMPLER:

EPA 8260 VOLATILES	RESULTS (ug/L)
Benzene	<1
Bromodichloromethane	<1
Bromoform	<1
Bromomethane	<1
Carbon tetrachloride	<1
Chlorobenzene	<1
Chloroethane	<1
2-Chloroethylvinyl ether	<10
Chloroform	<1
Chloromethane	<1
Dibromochloromethane	<1
1,3-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
1,4-Dichlorobenzene	110
1,1-Dichloroethane	<1
1,2-Dichloroethane	<1
1,1-Dichloroethene	. <1
trans-1,2-Dichloroethene	<1
1,2-Dichloropropane	<1 .
cis-1,3-Dichloropropene	<1
trans-1,3-Dichloropropene	<1
Ethyl benzene	<1
Methylene chloride	57
1,1,2,2-Tetrachloroethane	<1
Tetrachloroethene	<1
Toluene	24
1,1,1-Trichloroethane	<1
1,1,2-Trichloroethane	<1
Trichloroethene	<1
Trichlorofluoromethane	<1
Vinyl chloride	<1
Xylenes	<3

Safety & Environmental Resources, Inc. OSHAJEPA Training & Consulting

14009 JEFFERSON BLVD. P.O. BOX 1308 MISHAWAKA, IN 46546-1308 (219) 258-0778 PHONE:

24 HOUR PHONE: (219) 258-0507 (219) 258-4748

DAN WILSON PRESIDENT

DAN SCHROEDER **EXECUTIVE VICE PRESIDENT**

Waste Oil/Water Processing Specialty Products

> TRACE ID: K034-01 REPORT DATE: 02/21/95 ANALYSIS DATE: 02/13/95

> > ANALYST: gmr

CLIENT ID: R.E. Jackson

01/31/95 SAMPLE DATE: SAMPLE RECEIVED: 02/07/95

Water SAMPLE TYPE:

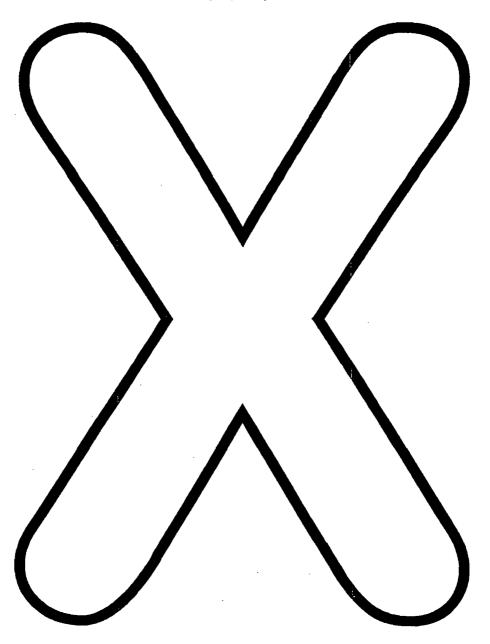
SAMPLE ID: Septic Tank #2 A0343 SAMPLER: km

EPA 82	60 VOLATILES	RESULTS	(ug/L)
Benzen	e	<1	
Bromod	ichloromethane	<1	
Bromof		<1	
Bromom	ethane	<1	
Carbon	tetrachloride	<1	
Chloro	benzene	<1	
Chloro	ethane	<1	
2-Chlo	roethylvinyl ether	<1	0
Chloro		<1	
Chloro	methane	<1	
Dibrom	ochloromethane	<1	
1,3-Di	chlorobenzene	<1	
	chlorobenzene	<1	
-	chlorobenzene	86	
1,1-Di	.chloroethane	<1	
	.chloroethane	2.	
	chloroethene	<1	
trans-	1,2-Dichloroethene	<1	
1,2-Di	chloropropane	<1	
cis-1,	3-Dichloropropene	<1	
trans-	·1,3-Dichloropropene	<1	
Ethyl	benzene	1.	
Methyl	ene chloride	59	
1,1,2,	2-Tetrachloroethane	<1	
Tetrac	chloroethene	<1	
Toluer	ie	9.	
1,1,1-	-Trichloroethane	<1	
	Trichloroethane	<1	
Trichl	oroethene	1.	
Trichl	orofluoromethane	<1	
Vinyl	chloride	<1	
Xylene	es :	. 16	

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R. E. Jackson Company, Inc.

53217 MARINA DRIVE ELKHART, INDIANA 46514-9586 219/264-7557

January 28, 1986

Elkhart County Health Department 315 S. 2nd Street Elkhart, IN 46516

ATTN: Max Michael

Dear Max:

On January 9, 1986, Norm Gray from the Indiana State Board of Health told me (after reviewing the MSDS on Grimex) that we could dump our degreasing fluid down our septic system. Mr. Gray said to check with city or county officials to see if they had any preconditioning requirements before dumping.

For your review, I have sent a copy of the MSDS on Grimex. Please look at it and give me a call at 264-7557.

Thank you.

Sincerely,

Stephen

Stephen Squibb Health & Safety Director

SSdw



STATE BOARD OF HEALTH

AN EQUAL OPPORTUNITY EMPLOYER

March 26, 1986

Mr. Stephen Squibb Health and Safety Director R. E. Jackson Company, Inc. 53217 Marina Drive Elkhart, IN 46514

Dear Mr. Squibb:



INDIANAPOLIS

Address Reply to: Indiana State Board of Health 1330 West Michigan Street

P. O. Box 1964 lianapolis, IN 46206-1964

Elk. Co. Health Dept.

Re: Discharge of Degreaser into Septic System

As a result of a conversation between you and a member of my staff on February 25, 1986, concerning the proposed disposal of industrial wastewater containing a heavy duty alkaline cleaner and degreaser (called "Grimex") along with associated contaminants into the plant septic system, staff has decided that this proposal should not be practiced for the following reason(s):

ouse of this type of compound may interfere with the settling performance of the solids in the septic tank and the eventual distribution of the wastewater into the tile field regardless of whether or not the industrial discharge is on a continuous or intermittent basis;

the resultant solids from the septic tank may not be ideally suited for the eventual treatment at the local publicly operated treatment works depending on septage characteristics.

If you have any questions concerning this matter, please contact Mr. Robert Kelsey of my staff at AC 317/633-0838.

Very truly yours

Larry J. Kane, Chief

Permits Section

Division of Water Pollution Control

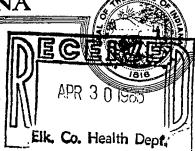
RAK/sck

cc: Elkhart County Health Department--Mr. Max Michael 🗸



STATE BOARD OF HEALTH

AN EQUAL OPPORTUNITY EMPLOYER April 24, 1985



INDIANAPOLIS

Address Reply to: Indiana State Board of Health 1330 West Michigan Street P. O. Box 1964 Indianapolis, IN 46206-1964

Eldon Squibb, Health and Safety Manager R.E. Jackson Company, Inc. 53217 Marina Drive Elkhart, IN 46514

Dear Mr. Squibb:

This is to affirm our telephone conversation regarding the disposal of used alkaline cleaner-degreaser at your facility. To avoid the possibility of groundwater pollution, our policy is that no industrial process wastes or wastewaters may be disposed of in a septic system or similar ground absorption, sanitary waste treatment system.

It is recommended that any wastewater generated by parts cleaning in your operation be collected and disposed of at an appropriate wastewater treatment facility. You may wish to enlist the assistance of a licensed liquid industrial waste hauler to accomplish this.

The wastewater should probably be analyzed for hazardous waste characteristics, particularly corrosivity (2>pH>12) before a disposal method is secured.

If you have further questions, contact me at 317/633-0840. Your concern in this matter has been proper.

Very truly yours,

Martin Risch

Groundwater Section

Division of Water Pollution Control

MRisch/lfv

cc: Mr. George Halloran

Inspection Section

Mr. Rick Brown

Elkhart County Health Department

PHONE CONVERSATION RECORD

Conversation with:	Dale
Name_ Joe Stallsmith	TimeAM/PM
CompanySBU - WPCO	
Address	□ Originator Placed Call
	☐ Originator Received Call
Phone 3/7-633-0795	
Subject RE JACKSO	N Discharge
Section 1 to 1	
Holes: Stallsmith	Mat. fired
571/13111	
+ Coppes	Sert
) Cop 23	
+ Too to	CC / Olle 11 TAM
T Son to	ca leffer stusen ISBH
	PF Jakso
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TO JOE STA/SMITH	From Max D Michael
ISBH- WPCD	Grandwater Protestion Program Gooding
	Elkhart County Health Dept
Subject R. E. Jackson Compa	·
MESSAGE	
Makeul Safet, Dato Sheet For	n Stephen Sques - It was our
	h inquiries were to be directed to
either pueself or horry Knue-	- Is About Gray non inchded?
Planse Keep He informed of	
RE Jickson Thinkyon Dat	e Fes 4 1926 Signed M-V. Mill
REPLY	
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
-No 9 FOLD	
No. 10 FOLD	
Dat	e Signed If)

NilsonJones
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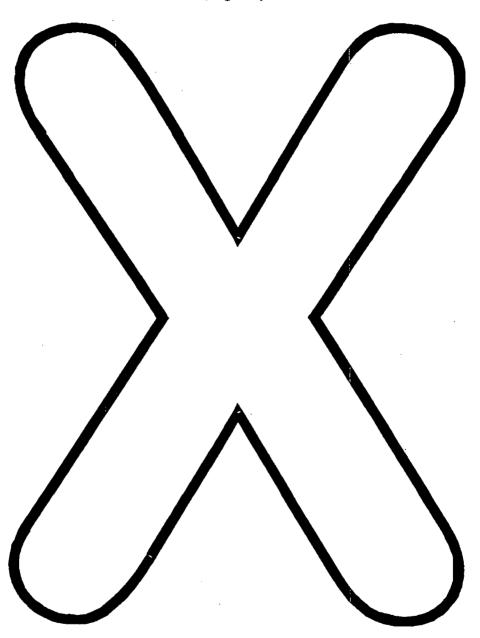
ELKHART COUNTY COMPLAINT FORM

Date:
LIDAD DRAIN IN NAW RULLDING WITH PIPE TO NEW
Complaint: 1-2002 COV
SEPTIC TANK - SUSPECT POSSIBLE PROCESS D/C - OTHER
SEPTIC TANK - SUSPECT POSSIBLE PROCESS D/C - OTHER (OBSERVED ORVIN) BUYLDING ATTACHED & 1,1,1-TRICHLOROETHANE USED-WHICH
WAS DENIED BY TERRY K. SHELLY, V.P. OPERATIONS - ALSO
OBSERVED COMPRESSORS LEAKING OIL ON FLOOR.
Property Owner: R.E. JACKSON CO., INC. Telephone Number: 264-7857
Address: 53217 MARINA DR.
Referral - Department: Date:
Conditions Found: SHELLY CLAIMED DRAIN WAS USED TO WASH WINDOW OF CONTROL FOR LEAKS - SYSTEM WAS GIVEN OK PER T.RW. FOR
COVER-UP.
Action: NEWO TO INCLUDE IN SURVEY
Reinvestigation: Closed:
By: Return Call Requested: Yes No
Reported By: ECHD PERSONNEL
Address:
Telephone Number:

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NATIONAL LABORATORIES

Lehn & Fink Industrial Products Division of Sterang Drug In Montvale, New Jersey 07645 EMERGENCY PHONE – 24 HOURS (201) 573-5700

CONFIDENTIAL MATERIAL DATA SHEET

Date of Issue November 1,1981	PRODUCT # NGRIMEX
I. IDENTIFICATION 1. Trade Name	GRIMER Heavy-Duty Alkaline Cleaner & Degreaser
2. Generic Description	Heavy Duty Alkaline Cleaner
3. Intended Use	Heavy Duty Cleaner-Degreaser for Heavily Soiled Environmental Surfaces
II. APPARENT HAZARDS (See Safety and Health Information — Sections V, VI and VII) *See section "Guidelines and	1. Skin Irritation [2] Irritant 2. Eye Irritation [3] Moderately irritating 3. Oral Toxicity [1] Non-Toxic 4. Dermal Toxicity [1] Non-Toxic 5. Inhalation Toxicity [1] Non-Toxic Definitions" 6. Is product a known strong skin sensitizer? [1] Yes [8] No
III. PRODUCT COMPOSITIO	N: Does this product contain materials in the following categories? If yes, hether a major or minor portion is present (minor ingredients—less than
I. Metals or metal compounds (In cadium, chromium, manganese,	cluding lead, mercury, arsenic, silver, beryllium, Ser Ser No , nickel, aluminum, lithium).
genated compounds, phosphate Phosphates -	g acids, alkalis, silica or silicates, cyanides, haio- s, sulfates, or asbestos) Minor Minor LE SUCKION Company, Inc.
-	ncluding carbon tetrachloride, other halogenated

4. Volatile aromatic carbon compounds, aromatic nit	ro or amino	compounds.		☐ Yes	E
					,
				·	
. Other materials of importance		• .		☐ Yes	X No
	•				
•					
V. <u>REACTIVITY DATA</u>					
l. Is material: Liquid 🔯 Solid 🗀 Gas 🗀 P	Paste 🗆	Powder	Aerosol		
	<u></u>				
2. Is material flammable?				☐ Yes	ĭ∑ No
Rash point and method used		···········			
lag closed of	up .				
, > 200° F		· · · · · · · · · · · · · · · · · · ·			
1. Is material explosive?				☐ Yes	🗷 No
	?	 			
5. Are volatile ingredients given off at room temperatu	ure:	·		☐ Yes	₩ No
6. Are volatile ingredients given off when heated during	U	se?		🗓 Yes	□ No
Glycol ethe	r				
7. Is material known to react violently with other mat	erials? If ve	es, explain.	· · · · · · · · · · · · · · · · · · ·	☐ Yes	√ No
	,				
					.*
HANDLING, STORAGE, TRANSPORTATIO	·		UIREMEN	ITS	
DANGER: Keep out of reach of children.	Canses.		ion us	omfiil 15	ous 11s
Contains alkaline materials. rubber gloves and protective ge	Avoid con	tact with e	yes. Wea	ar plasti	c or

use only.

10

ŢŢ	n case of eye contact, flush with plenty of water for 15 minutes. Call a physici f swallowed, do not induce vomiting. Call a physician immediately. Administer arge quantities of milk or egg whites beaten in water.
VII.	SPECIAL PROTECTION INFORMATION
	1. Ventilation
	Not Applicable
•	
<u> </u>	2 Prominatory Protection
	2. Respiratory Protection
	Not Applicable
	•
•	
	0 Oil B 4 1 M
	3. Other Protective Measures
W	ear plastic or rubber gloves and protective goggles when handling.
VIII	LABELING Where applicable, this product is labeled and packaged in accordance with the regulations of the following agencies.
	Department of Transportation, under the Federal Hazardous Materials Transportation Act.
	Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act.
	Consumer Products Safety Commission under the Federal Hazardous Substances Act.
	The information herein is given in good faith but no warranty, express or implied, is made.

... AID PROCEDURES

8 land

GUIDELINES and DEFINITIONS

SKIN IRRITATION: Ratings corresponding to the following definitions are derived from data obtaining the test methods as described in the 16 CFR 1500.41 and categories of toxicity as described in 16 CFR 1500.3.

- 1. Practically Non-Irritating: The undiluted product may cause mild or slight inflammation (edema and erythema skin reaction values of 0 or 1) of intact and abraded skin of rabbits following immediate, prolonged, or repeated contact during the study period. Primary Irritation Index of 0-1.9.
- 2. Irritant: The undiluted product causes inflammation (edema and erythema skin reaction values of primarily 1 and/or 2) of intact or abraded skin of rabbits following immediate, prolonged or repeated contact during the study period. Primary Irritation Index of 2-4.
- 3. Primary Skin Irritant: The undiluted product causes moderate to severe inflammation (edema and erythema skin reaction values of primarily 3 and/or 4) upon immediate, prolonged or repeated contact with the intact or abraded skin of rabbits. Primary Irritation Index of 5 or more.
- 4. Corrosive: The undiluted product causes visible destruction or irreversible alterations of the tissue structure at the site of contact on intact or abraded skin of rabbits following immediate prolonged or repeated contact.

EYE IRRITATION: Ratings corresponding to the following definitions are derived from data obtained from test methods described in the 16 CFR 1500.42 and according to the Draize Scale for scoring ocular lesions obtained from "Appraisals of the Safety of Chemicals in Food, Drugs, and Cosmetics," pp. 49-51, 1959.

- 1. Slightly Irritating: The undiluted product, when instilled into the eyes of rabbits, produces no noticeable irritation, or slight conjunctival irritation. (Average Draize score range 0.00-15.0).
- 2. Mildly Irritating: The undiluted product, when instilled into the eyes of rabbits, produces mild to moderate conjunctival irritation, mild corneal involvement with or without mild iritis. (Average Draize score range 15.1-1-25.0).
- 3. Moderately Irritating: The undiluted product, when instilled into the eyes of rabbits, produces moderate corneal involvement with or without severe iritis. (Average Draize score range 25.1-50.0).
- 4. Strongly Irritating: The undiluted product, when instilled into the eyes of rabbits, produces severe corneal involvement with or without severe iritis. (Average Draize score range 50.1-110.0).

ORAL TOXICITY: Ratings corresponding to the following definitions are derived from data obtained from the test methods as described in the 16 CFR 1500.40 and categories of toxicity as described in 16 CFR 1500.3.

- 1. Non-Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD₅₀) is greater than 5 grams per kilogram of body weight.
- 2. Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD₅₀) is greater than 50 milligrams and less than or equal to 5 grams per kilogram of body weight.
- 3. Highly Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD_{50}) is less than or equal to 50 milligrams per kilogram of body weight.

DERMAL TOXICITY: Ratings corresponding to the following definition are derived from data obtained from the test methods as described in 16 CFR 1500.40 and categories of toxicity as described in 16 CFR 1500.3.

- 1. Non-Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD_{50}) is greater than 2 grams per kilogram of body weight.
- 2. Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD₅₀) is greater than the 200 milligrams and less than or equal to 2 grams per kilogram of body weight.
- 3. Highly Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD_{50}) is less than or equal to 200 milligrams per kilogram of body weight.

INHALATION TOXICITY: Ratings corresponding to the following definitions are derived from the categories of toxicity described in 16 CFR 1500.3.

- 1. Non-Toxic: The probable lethal concentration of the undiluted product to 50% of the test animals (LC₅₀) is greater than 200 milligrams per liter by volume when inhaled continuously for one hour or less.
- 2. Toxic: The probable lethal concentration of the undiluted product to 50% of the test animals (LC_{50}) is greater than 2 milligrams and less than or equal to 200 milligrams per liter by volume when inhaled continuously for one hour or less.
- 3. Highly Toxic: The probable letted concentration of the undiluted product to 50% of the test animals of the loss than or equal to the common per liter by volume when inhaled continuously for one hour

GRIMEX - HEAVY DUTY ALKALINE CLEANER

PRODUCT DATA

CHARACTERISTIC	TEST METHOD	PHYSICAL PROPERTEST RESULT
Appearance.	· .	Liquid .
Calor		Light Straw
Odor	•	Mild
Viscosity @ 77°F, cps	Brookfield, spindle #1 @60 rpm LVF	5 cps
Specific Gravity @ 77°F		1.131
Weight/Gallon @ 77°F		9.43
Solubility, Hard or Soft Water		Complete
pH, Concentrate	ASTM E-70	12.9
pH, 1:10	ASTM E-70	11.8
Rinsing Properties 1:5	ASTM D-1281	Excellent
Abrasives		None
Detergency		Excellent
Deleterious Effect on Flooring Asphalt Vinyl Vinyl Asbestos	Federal Specification PD-220	Not Recommended On Resilient Floors
Foaming	·	Low
Phosphates, % as P	Calculated	1.09
Biodegradability (surfactants)		Yes
USDA Category	·	A1
Flash Point	ASTM D-56 (TCC)	> 200°F
Fire Point	ASTM D-92 (TOC)	> 200°F
Flammability	,	Non-Flammable
Storage	· ·	No Special Requirements

e.c. Claire

U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration

Form Approved OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SE	ECTION I
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
NATIONAL LABORATORIES	201-391-8500
ADDRESS (Number, Street, City, State, and ZIP Code) 225 SUMMIT AVE., MONTVALE, N.J. 07645	
CHEMICAL NAME AND SYNONYMS Heavy Duty Alkaline Cleaner & Degreaser	TRADE NAME AND SYNONYMS
CHEMICAL FAMILY	FORMULA
	FORMULA

	SECTION	V 11 -	HAZAF	RDOUS INGREDIENTS		
PAINTS, PF	RESERVATIVES, & SOLVENTS	*	TLV (Units)	ALLOYS AND METALLIC COATINGS	*	TLV (Units)
PIGMENTS	NOT APPLICABLE			BASE METAL NOT APPLICABLE		
CATALYST	NOT APPLICABLE			ALLOYS NOT APPLICABLE		
VEHICLE	NOT APPLICABLE			METALLIC COATINGS NOT APPLICABLE		
SOLVENTS	NOT APPLICABLE			FILLER METAL NOT APPLICABLE PLUS COATING OR CORE FLUX		
ADDITIVES	NOT APPLICABLE			OTHERS		
OTHERS .						
	HAZARDOUS MIXTURE	S OF	OTHER LI	QUIDS, SOLIDS, OR GASES	×	TLV (Units)
	Phosphates				. ⊲10	
	Potassium Hydroxide				<10	

SECT	ION III - F	PHYSICAL DATA	· · · · · · · · · · · · · · · · · · ·
BOILING POINT (°F.) NOT AVAILABLE		SPECIFIC GRAVITY (H2O=1)	1,131
VAPOR PRESSURE (mm Hg.NOT AVAILABLE	***************************************	PERCENT, VOLATILE NOT AVAILABLE	
VAPOR DENSITY (AIR-1) NOT AVAILABLE		EVAPORATION RATE NOT AVAILABLE	·
SOLUBILITY IN WATER	Complete		
APPEARANCE AND ODOR Clear Liquid with 1	mild odor.		······································

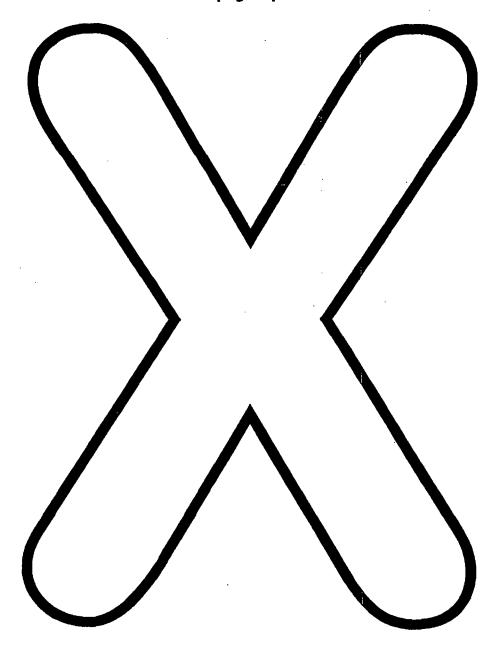
	SECTION IV - FIRE AND	EXPLOSION HAZARD DAT	ГА	
FLASH POINT (Method used	>200 F Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel.
EXTINGUISHING MEDIA	None required - non-flammable	9		
SPECIAL FIRE FIGHTING	PROCEDURES			
UNUSUAL FIRE AND EXPL	OSION HAZARDS			

,				· · · · · · · · · · · · · · · · · · ·	·	7
	SI	ECTION	V · HEA	LTH HAZARD	DATA	
THRESHOLD LIMIT	VALUE N	OT APP	LICABLE			
EFFECTS OF OVER	EXPOSURE					
						
EMERGENCY AND I	FIRST AID PROCEDU	RES WAI	RNING: Cause	es eye irritation. Her	mful if swellowed. Contains atkaline materials. Ites. Call a physician. If swellowed, do not	•
induce vomiting. C	all a physician immedi	ately. Adi	minister large o	quentities of milk or e	ngg whites beaten in water.	
			•			<u></u>
		SECTIO	ON VI - R	EACTIVITY DA	ATA	
STABILITY	UNSTABLE		CONDITION	S TO AVOID		
	STABLE	X	 			
INCOMPATABILITY	(Materials to avoid)		Avoid Acid	f Materials		
HAZARDOUŞ DECO	MPOSITION PRODUC	CTS	7.7010 7010			
	MAY OCCUP		- T -	CONDITIONS TO	AVOID	
HAZARDOUS POLYMERIZATION	WILL NOT O					
	WICE NOT C		X	<u> </u>		
•		·		·		
	SECT	ION VI	- SPILL	OR LEAK PRO	CEDURES	
STEPS TO BE TAKE	N IN CASE MATERIA	AL IS RE	EASED OR	SPILLED		
Wear rubber or place	tic gloves and goggle	ee and ab	sorb with rac	ar con duct		
Tron Tubbel Of plas	itte giovas and goggi	-3 4114 44	SOLD WITH LEF	s or saw dust.		
WASTE DISPOSAL N	METHOD					
Dispose in trash col	lection			·		
		 -				
				-		
	SECTION	VIII - S	SPECIAL P	ROTECTION II	NFORMATION	-
RESPIRATORY PRO	TECTION (Specify ty	pe)	· · · · · · · · · · · · · · · · · · ·	NOT APPLIC	CABLE	
VENTILATION	LOCAL EXHAUST	NOT A	PPLICABLE	*	SPECIAL	
	MECHANICAL (Gen	<i>ieral)</i> N	OT APPLICA	ARIF	OTHER	
PROTECTIVE GLOV Wear rubber or plas	ES tic gloves			EYE PROTECTION Wear goggles who	N handling	
OTHER PROTECTIV				1 stage Robbles Mile	en nandiing.	
			······································			
	SE	CTION	IX - SPE	CIAL PRECAU	TIONS	
PRECAUTIONS TO E	BE TAKEN IN HAND			Keep out of reach	······································	
						
OTHER PRECAUTIO	NS .					
			· · · · · · · · · · · · · · · · · · ·			

Multi-Page Separator Sheet

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March 22,1991

Facility Identification:

R. E. Jackson Company, Inc. 53217 Marina Drive Elkhart, IN 46514

S.I.C. Code 3429

Dun & Bradstreet Number: 06-585-4887

Emergency Contact: Robert (Bob) Fritz

Health & Safety Director

Phone: 219/264-7557

Report Period:

January 1 to December 31, 1990

R. E. Jackson Company, Inc. is a Small Quantity Generator. We have no E.H.S. at all, and any other substances we have do not meet or exceed the Threshold Planning Qualifications.

I spoke with Dave Daugherty of Indiana E.P.A. and he felt this letter to you was all that was required to comply with SARA Title III.

If any further information is needed, please contact me. I will be happy to submit any forms required.

Sincerely,

Robert Fritz

Health & Safety Director

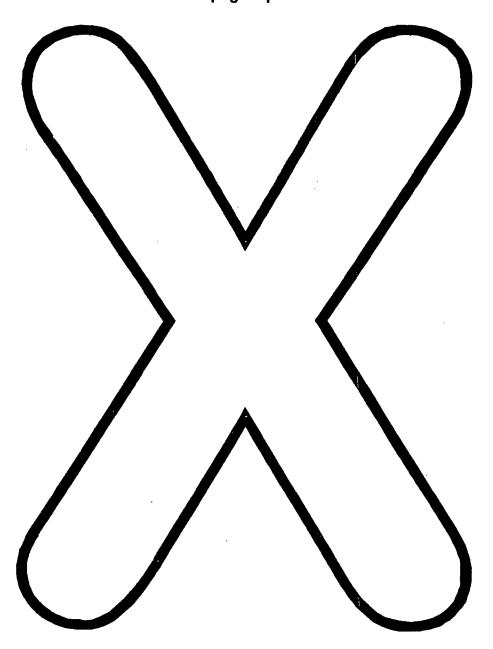
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ELKHART COUNTY COMMISSIONERS OFFICE

FEB 29 1988

February 26, 1988

RECEIVED

Elkhart County Commissioners Office Administration Office Building 117 North Second Street Goshen, IN 46526

Gentlemen:

After having reviewed the required forms, I find that neither Tier One nor Tier Two are applicable to R. E. Jackson Company, Inc.

Your cooperation in keeping us informed of all pertinent forms to file and regulations to cover is greatly appreciated.

Sincerely,

Robert D. Fritz

Health & Safety Director

encl.

RDF/sm

Fo	rm	ge App	rove	d O	of MB	No.	20	50-0	age
(0) 48000	8.788			88.48	20000		<u></u>		
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		Check	k If s	Ite p	lan l	s all	acne	a	
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		Check	k If s	lte p	lan k	Satt	acre		
		Check	k If s	lte p	lan l	Satt	acrie .		
		Check	k If s	lte p	lan l	Satt	acre		

Aggregate Information by Hazard Type mportant: Read instructions before completing form	ONLY Date Received Reporting Period From January 1 to December 31, 19
Tier One CHEMICAL INVENTORY	FOR ID#

Facility:Identification Name Street Address City State Zip SIC Code Dun & Brad Number Owner/Operator Name Mail Address Phone ()	Emergency Contacts Name Title Phone () 24 Hour Phone () Name Title Phone () All Phone () All Phone () All Phone () All Phone ()
Average Number Dally of Days Hazard Type Amount Amount On-Site General	Check if site plan is attached Location
Fire	
Sudden Release of Pressure Reactivity Reactivity	
Immediate (acute)	
Immediate (acute) Delayed (Chronic)	
Certification (Read and sign after completing all sections)	Ranges Value Weight Range in Pounds From To

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. Name and official title of owner/operator OR owner/operator's authorized representative		
	the information submitted in this and all attack inquiry of those individuals responsible for obtain	hed documents, and that based on my alning the information, I believe that
	Certification (Read and sign after con	apieting att sections)

Reporting Ranges	Range Value	Weight Range From	In Pounds
	00	0	99
	01	100 .	999
	02	1000	9,999
	03	10,000	99,999
	04	100,000	999,999
	05	1,000,000	9,999,999
	06	10,000,000	49,999,999
	07	50,000,000	99,999,999
	80	100,000,000	499,999,999
	09	500,000,000	999,999,999
	10	1 billion	higher than 1 billion

	Facility Identification			Owner/Operate	or Name
Tier Two	NameStreet Address			Name	
AND HAZARDOUS CHEMICAL	City	State	Zip	Emergency Co	
INVENTORY Specific	SIC Code Dun & Brad Number	(Name	2
Information by Chemical	FOR OFFICIAL D //			Name	
				Phone ()	2
Important: Re	ead all instructions before completing	Management and the second			od From January 1 to December
Chem	nical Description	Physical and Health Hazards (check all that apply)	Max. Av Daily Dail Amount Amo (code) (code)	ly Days unt On-site	Storage Code Sto
CAS	Trade Secret	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)			
Check all that apply: Pure	a Mix Solid Liquid Gas				
CAS Chem. Name	Trade Secret	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)			
that apply: Pure	e Mix Solid Liquid Gas				
CASChem. Name	Trade Secret	Fire Sudden Release of Pressure Reactivity Immediate (acute)			
Check all that apply: Pure	e Mix Solid Liquid Gas	Delayed (chronic)			
" I certify under p	Read and sign after completing all section enalty of law that I have personally examined and those individuals responsible for obtaining the ignormal section.	d am familiar with the info			
	It title of owner/operator OR owner/operator's at	uthorized representative	Signature		Date signed

Tier Two EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY Specific Information by Chemical	Street Address City State Zip SIC Code Dun & Brad Number FOR OFFICIAL USE ONLY Date Received	Mail Address Emergency C Name Phone Name Phone)	ontact
	ead all instructions before completing form	A CONTRACTOR	od From January 1 to December 31, 1 Storage Coc
Conf	idential Location Information	Sheet	Storage Codes Storage
CAS#	Chem. Name		
CAS#	Chem. Name		
CAS#	Chem. Name		
Certification	(Read and sign after completing all sections)		
I certify under p	enalty of law that I have personally examined and am familiar with the information submitted those individuals responsible for obtaining the information, I believe that the submitted inform		
Name and officia	I title of owner/operator OR owner/operator's authorized representative Signature -		Date signed



February 26, 1988

Elkhart County Emergency Response Committee Administrative Office Building 117 North Second Street Goshen, IN 46526

Subj: Required MSDS Sheets

Gentlemen:

Enclosed are the MSDS sheets for R. E. Jackson Company, Inc., required under the new SARA provision Title III: The Emergency Planning and Community Right-to-Know Act of 1986.

Sincerely,

Robert D. Fritz

Health & Safety Director

encl.

RDF/sm

Lahn & Fink Industrial Products Division of Sterling Drug In Montrale, New Jersey 07645

EMERGENCY PHONE - 24 HOURS (201) 573-5700

CONFIDENTIAL MATERIAL DATA SHEET

Date of	fissue November 1,198	PRODUCT # NO	RIMEX
I.	IDENTIFICATION 1. Trade Name	GRIMEX Heavy-Duty Alkaline Cleaner & Degreaser	
	2. Generic Description	Heavy Duty Alkaline Cleaner	
	3. Intended Use	Heavy Duty Cleaner-Degreaser for Heavily Soiled Environmental Surfaces	:
II.	APPARENT HAZARDS		
	(See Safety and Health Information — Sections V, VI and V I I)	1. Skin Irritation [2] Irritant 2. Eye Irritation [3] Moderately i 3. Oral Toxicity [1] Non-Toxic 4. Dermal Toxicity [1] Non-Toxic 5. Inhalation Toxicity [1] Non-Toxic	rritating
	*See section "Guidelines and	Definitions" 6. Is product a known strong skin sensitizer?	Yes 🖾 No
III.	PRODUCT COMPOSITION name each material and was 10% of total composition	hether a major or minor portion is present (minor ingredients—	
		ncluding lead, mercury, arsenie, silver, beryllium, System Ye, nickel, aluminum, lithium).	es 🗷 No
	•		
	ganie compounds (Includir ted compounds, phosphate	ng acids, aikalis, silica or silicates, cyanides, haio- es, sulfates, or asbestos)	·s 🗆 No
Ph	nosphates	Minor	
Po	otassium Hydroxide -	Minor	
		r	·
hydi	• •	Including carbon tetrachloride, other halogenated \(\Boxed{\omega}\) Yonethyl alcohol, acrolein, peroxides, glycols, carbon (ctones).	s 🗷 No

4. Volatile aro	matic carbon o	ompounds,	aromatic	nitro or amir	o compounds.		☐ Yes	ES (O
•	•					•		
								Ĺ.
. O.I.				·				₩ No
5. Other mater	iais of importa	ince					☐ Yes	73C1 14.0 :
·		· .	·	. `				
				e .		•		
					÷			
IV. REACT	TIVITY DATA		<u> </u>	•				
1. Is material:	Liquid ⊠	Solid	Gas 🗀	Paste	Powder	Aerosol		,
			··· <u>-·</u> ··		4	I ·		
2. Is material i	lammable?						☐ Yes	ĭ No
3. Flash point	and method us	ed Tag	Closed	Cup				
		,>200	o ^o F					
4. Is material e							Yes	IX No
5. Are volatile	ingrealents giv	en off at roo	om tempei	rature?	·		☐ Yes	₩ No
	······································		-		·			· · · · · · · · · · · · · · · · · · ·
6. Are volatile	ingredients giv			_	use?		X Yes	□ No
		· G	lycol et	her				
7. Is material k	nown to react	violently wi	ith other n	naterials? If	yes, explain.		☐ Yes	₪ No
					•			
v. HANDI	LING, STORA	GE, TRANS	SPORTAT	ION, AND I	DISPOSAL REÇ	UIREMEN	NTS	
DANGER:	Keep out of	reach of	childro	n Causas	n,	.da		
	Contains al	kaline ma	terials.	Avoid co	eye irritat ontact with e For industr	ves. We	ar plasti	swallowed. c or onal

use only.

1 ب	ΛID	PR()	CEDU	URES
-----	-----	------	------	------

In	case of the	contact,	flush w	ith plen	ty of	water	for	15 minutes.	Call a	physician
Ιf	swallowed	do not in	duce vom	iting.	Call a	physi	lcian	immediately	. Admin	ister
lar	ge quantiti	es of mil	c or egg	whites	beaten	in wa	ater.			

VII. SPECIAL PROTECTION INFORMATION

1. Ventilation

Not Applicable

2. Respiratory Protection

Not Applicable

3. Other Protective Measures

Wear plastic or rubber gloves and protective goggles when handling.

VIII LABELING

Where applicable, this product is labeled and packaged in accordance with the regulations of the following agencies.

- Department of Transportation, under the Federal Hazardous Materials Transportation Act.
- Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act.
- **□** Consumer Products Safety Commission under the Federal Hazardous Substances Act.

The information herein is given in good faith but no warranty, express or implied, is made.

PC. Plano

GUIDELINES and DEFINITIONS

SKIN IRRITATION: Ratings corresponding to the following definitions are derived from data obtained from the test methods as described in the 16 CFR 1500.41 and categories of toxicity as described in 16 CFR 1500.3.

- 1. Practically Non-Irritating: The undiluted product may cause mild or slight inflammation (edema and erythema skin reaction values of 0 or 1) of intact and abraded skin of rabbits following immediate, prolonged, or repeated contact during the study period. Primary Irritation Index of 0-1.9.
- 2. Irritant: The undiluted product causes inflammation (edema and erythema skin reaction values of primarily 1 and/or 2) of intact or abraded skin of rabbits following immediate, prolonged or repeated contact during the study period. Primary Irritation Index of 2-4.
- 3. Primary Skin Irritant: The undiluted product causes moderate to severe inflammation (edema and erythema skin reaction values of primarily 3 and/or 4) upon immediate, prolonged or repeated contact with the intact or abraded skin of rabbits. Primary Irritation Index of 5 or more.
- 4. Corrosive: The undiluted product causes visible destruction or irreversible alterations of the tissue structure at the site of contact on intact or abraded skin of rabbits following immediate prolonged or repeated contact.

EYE IRRITATION: Ratings corresponding to the following definitions are derived from data obtained from test methods described in the 16 CFR 1500.42 and according to the Draize Scale for scoring ocular lesions obtained from "Appraisals of the Safety of Chemicals in Food, Drugs, and Cosmetics," pp. 49-51, 1959.

- 1. Slightly Irritating: The undiluted product, when instilled into the eyes of rabbits, produces no noticeable irritation, or slight conjunctival irritation. (Average Draize score range 0.00-15.0).
- 2. Mildly Irritating: The undiluted product, when instilled into the eyes of rabbits, produces mild to moderate conjunctival irritation, mild corneal involvement with or without mild iritis. (Average Draize score range 15.1-1-25.0).
- 3. Moderately Irritating: The undiluted product, when instilled into the eyes of rabbits, produces moderate corneal involvement with or without severe iritis. (Average Draize score range 25.1-50.0).
- 4. Strongly Irritating: The undiluted product, when instilled into the eyes of rabbits, produces severe corneal involvement with or without severe iritis. (Average Draize score range 50.1-110.0).

ORAL TOXICITY: Ratings corresponding to the following definitions are derived from data obtained from the test methods as described in the 16 CFR 1500.40 and categories of toxicity as described in 16 CFR 1500.3.

- 1. Non-Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD₅₀) is greater than 5 grams per kilogram of body weight.
- 2. Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD₅₀) is greater than 50 milligrams and less than or equal to 5 grams per kilogram of body weight.
- 3. Highly Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from ingestion studies (LD_{50}) is less than or equal to 50 milligrams per kilogram of body weight.

DERMAL TOXICITY: Ratings corresponding to the following definition are derived from data obtained from the test methods as described in 16 CFR 1500.40 and categories of toxicity as described in 16 CFR 1500.3.

- 1. Non-Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD₅₀) is greater than 2 grams per kilogram of body weight.
- 2. Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD_{50}) is greater than the 200 milligrams and less than or equal to 2 grams per kilogram of body weight.
- 3. Highly Toxic: The probable lethal dose of undiluted product to 50% of the test animals determined from dermal toxicity studies (LD_{50}) is less than or equal to 200 milligrams per kilogram of body weight.

INHALATION TOXICITY: Ratings corresponding to the following definitions are derived from the categories of toxicity described in 16 CFR 1500.3.

- 1. Non-Toxic: The probable lethal concentration of the undiluted product to 50% of the test animals (LC₅₀ is greater than 200 milligrams per liter by volume when inhaled continuously for one hour or less.
- 2. Toxic: The probable lethal concentration of the undiluted product to 50% of the test animals (LC_{50}) is greater than 2 milligrams and less than or equal to 200 milligrams per liter by volume when inhaled continuously for one hour or less.
- 3. Highly Toxic: The probable lethal concentration of the undiluted product to 50% of the test animals (LC_{50}) is less than or equal to 2 milligrams per liter by volume when inhaled continuously for one hour

GRIMEX - HEAVY DUTY ALKALINE CLEANER

PRODUCT DATA

CHARACTERISTIC	TEST METHOD	PHYSICAL PROPERT TEST RESULT
Appearance		Liquid
Calar		Light Straw
Odor		Mild
Viscosity @ 77°F, cps	Brookfield, spindle #1 @60 rpm LVF	5 cps
Specific Gravity @ 77°F		1,131
Weight/Gallon @ 77°F		9.43
Solubility, Hard or Soft Water		Complete
pH, Concentrate	ASTM E-70	12.9
pH, 1:10	ASTM E-70	11.8
Rinsing Properties 1:5	ASTM D-1281	Excellent
Abrasives		None
Detergency		Excellent
Deleterious Effect on Flooring Asphalt Vinyl Vinyl Asbestos	Federal Specification PD-220	Not Recommended On Resilient Floors
Foaming		Low
Phosphates, % as P	Calculated	1.09
Biodegradability (surfactants)		Yes
USDA Category		A1
Flash Point	ASTM D-56 (TCC)	> 200°F
Fire Point	ASTM D-92 (TOC)	> 200°F
Flammability		Non-Flammable
Sturage		No Special Requirements

e.c. Claire

U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration

Form Approved OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

,	ECTION I
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
NATIONAL LABORATORIES	201-391-8500
ADDRESS (Number, Street, City, State, and ZIP Code) 225 SUMMIT AVE., MONTVALE, N.J. 07645	
CHEMICAL NAME AND SYNONYMS Heavy Duty Alkaline Cleaner & Degreaser	TRADE NAME AND SYNONYMS GRIMEX
CHEMICAL FAMILY	FORMULA

	SECTION	11 -	HAZAF	RDOUS INGREDIENTS		
PAINTS, PRESERVATIVES, & SOLVENTS		% TLV ALLOYS AND METALLI		ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS	NOT APPLICABLE			BASE METAL NOT APPLICABLE		
CATALYST	NOT APPLICABLE			ALLOYS NOT APPLICABLE		
VEHICLE	NOT APPLICABLE			METALLIC COATINGS NOT APPLICABLE		
SOLVENTS	NOT APPLICABLE			FILLER METAL NOT APPLICABLE PLUS COATING OR CORE FLUX		
ADDITIVES	NOT APPLICABLE			OTHERS .		
OTHERS				·		
	HAZARDOUS MIXTURES	SOF	OTHER LI	QUIDS, SOLIDS, OR GASES	%	TLV (Units)
	Phosphates				<10	
	Potassium Hydroxide				<10	
,	•					
	<u></u>	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·			

ION III - F	PHYSICAL DATA	
	SPECIFIC GRAVITY (H2O=1)	1,131
-	PERCENT, VOLATILE NOT AVAILABLE	
	EVAPORATION RATE NOT AVAILABLE	
Complete		1
		PERCENT, VOLATILE NOT AVAILABLE BY VOLUME (%) EVAPORATION RATE (

SECTION IV - FIRE AND	EXPLOSION HAZARD DAT	A	
FLASH POINT (Method used) >200°F Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA None required — non-flammable	9		·
SPECIAL FIRE FIGHTING PROCEDURES			····
UNUSUAL FIRE AND EXPLOSION HAZARDS	· · · · · · · · · · · · · · · · · · ·	·····	<u>·</u>
	·		-
			

					
THREEDOLOLUS				LTH HAZARI	5 42 64 5 C
THRESHOLD LIMI		NOT APP	LICABLE		
EFFECTS OF OVE					ាន មានស្នើ
					to the control of the company of the company of the control of the
Avoid contact wit	heyes. In case of eye o	ontact, flu	sh with plenty	of water for 15 mi	armful if swallowed. Contains alkaline materials. nutes. Call a physician. If swallowed, do not
induce vomiting.	Call a physician immed	iately. Adı	minister large (quantities of milk o	r egg whites beaten in water.
					Secretary Street, Str. Some
					to the expeditional language and the second section of the section of the second section of the section of the second section of the section of
		SECTIO	ON VI - R	EACTIVITY	DATA (** 1967) & Struck Control & Control ATAC
TABILITY	UNSTABLE		CONDITIO	NS TO AVOID	and the second section of the section of t
	STABLE	×			
NCOMPATABILIT	(Materials to avoid)		Avoid Aci	d Materials	ाक्षा ाच है कि स्वतिक के स्वतिक स
AZARDOUS DEC	OMPOSITION PRODU	CTS			STATE OF THE SAME AND STATE
AZARDOUS	MAY OCCU	R		CONDITIONS	OIOVA OID
OLYMERIZATION	WILL NOT	OCCUR	X		ready JRPA YOU
	······································		. • · • · · · · · · · · · · · · · · · ·		. 10.10(18/03/1905)
	SECT	ION VI	I - SPILL	OR LEAK PR	OCEDURES
TEPS TO BE TAK	EN IN CASE MATER	IAL IS RE	LEASED OR	SPILLED	
Near rubber or pla	astic gloves and gogg	les and ab	sorb with ra	gs or saw dust.	
				·	
ASTE DISPOSAL	METHOD	, , , , , , , , , , , , , , , , , , , 			
Dispose in trash co	ollection.	···			en e
	., ., .,		·····		and the second s
	SECTION	VIII -	SPECIAL	PROTECTION	INFORMATION
ESPIRATORY PR	OTECTION (Specify 1	ype)		NOT APP	LICABLE
ENTILATION	LOCAL EXHAUST	NOT A	PPLICABLE		SPECIAL
	MECHANICAL /Ge	neral)	OT APPLIC	ABLE	OTHER WAY AND THE Y
ROTECTIVE GLO Vear rubber or pla	ves istic gloves.			EYE PROTECT Wear googles v	ton vhen handling.
THER PROTECTI			/ '	0-33	The state of the s
· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		to the same
•	S	ECTION	IIX - SPE	CIAL PRECA	UTIONS (1994) (Beeks specialistic (1994) (1995)
RECAUTIONS TO	BE TAKEN IN HAND	LING AN	D STORING	Keep out of rea	ch of children: 354
		<u> </u>		,	
THER PRECAUTI	ons				
	·				to the state of th

PORM NO LIB-003-4-MAY 1969



SHELL OIL COMPANY SHELL CHEMICAL COMPANY SHELL DEVELOPMENT COMPANY SHELL PIPE LINE CORPORATION

Mene 5200-1



MATERIAL SAFETY DATA SHEET

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not I used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may regult in a violation of law order structs arounds for legal action.

• •		SECTION	V.1 .			
Shell Chemical Company				(713) 4	73-9461	
One Shell Plaza. P. O. Box	9463 F	Touston.	Teras 7700	1	· · · · · · · · · · · · · · · · · · ·	
Methyl ethyl ketone/butanone	200	1EK	7	RADE HAME	•	
HEMICAL FAMILY Kotones			ORNULA CH3 C	О С ₂ Н ₅		
Recones		I				
SECTI	ON II	HAZARDO	US INGREDIE	ENTS"		
	<u> </u>		LD.	30	LCso	
COMPOSITION		SPECIES	ORAL	DERMAL	CONCENTRATION	₩OV
Methyl ethyl ketone	100	Rat	3.3 g/kg		>2,000 ppm	1
		Rabbit		>8. ml/kg		
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	l		· · ·			
OILING POINT + FI	ECTION		SICAL DATA	UTY (HaOmili:		
1		.75		60	/60°F	0.8
APOR PRESSURE (mmHg) @ 68°F	7	5	PERCENT VOLA	,		1
POR DENSITY (ATR = 1)	2	2.5	EVAPORATION DE BUAC	=1) ·		3.8
LUBILITY IN WATER	2	7% w		(Fast e	vaporating)	
PPEARANCE AND COOR Colorless, mobile liquid. F	ungent	odor.			•	. [
SECTION IV	FIRE	AND EXPL	LOSION HAZA	ARD DATA	·	
ash point (Method used) 20°F TCC		•	FLAMMASL	C LIMITS	1.8	11.5
1 . 6015 HT & 6 MEDIA					1 2 2	***
Alcohol foam", CO2, dry che	mical,	water s	pray or for	<u> </u>		
COLAR FIRE FIGHTIME PROCEDURES VERY VOIATILE and extremely	flamma	ble.				
HUSUAL FIRE AND EXPLOSION MAZARDS	·		· .			
		•	•			

THRESHOLD LIMIT	·VALUE						
200 ppm (OSHA)	1					
Eve and no	ose irritation	a, dizzines	ss. he	adache. naus	sea. lack	of coordi	nation.
unconsciou							LYLLAX MA
	The second secon	-M-L					
Inhalation	-Remove victi	m to fresh	air.	Give arti	ficial res	spiration	f breathing
minutes.	d. Seek medical	attention	Swa	Liowing-Indi	uce yomit	ing. Seek	medical
attention.	Skin-Wash w	with soap a	ind wat	ter.			
		SECTION		EACTIVITY D	ATA .		
STABILITY	UNSTABLE .			and open f	lame.		
	STARLE	X					
INCOMPATIBILITY	(Materials to avoid) .		A 1447				
Strong OX	dizing agents	I					
				CONDITIONS TO	AVOID	·, · · · · · · · · · · · · · · · · · ·	
HAZARDOUS POLYMERIZATI	MAY OCCUR						
POLYMENIAMI	WILL NOT C	CCUR	X				
	•						
	. ce	CTION VII	SDILL	OR LEAK PRO	OCEDURES		
ATERS TO BE TAKE	H IN CASE MATERIAL IS					evacuate t	he area
Very volat	ile and extre	mely flamm	nable.	Eliminate	ignition	SOurces	Weer ennro-
priate clo	thing and bre	athing app	aratus	keep out	of sewer	s and other	r public
the area.	thing and breems. Notify Dike and pum sidue and sma	m off larg	ge spil	lls into sal	Lyage or s	torage cor	tainers.
yermiculit	e. Place in	leak-proof	stee.	drums for	disposal.	Seal and	i mark
WASTE DISP	POSAL METHOD						
Controlled	incineration	or hurial	in ar	proved land	16111		
							1
	SECTIO	ON VIII SPE	ECIAL	PROTECTION	INFORMAT	ION	
ACSP-RATORY PAGE	oved air pack						
VENTIL ATION	LOCAL ENAUS	1			SPEC.A	· ·	
	AS requir	General)	tain 1	TA	OTHER		
	Recommend	led .		41			
TO BOOK TO A STATE OF THE PARTY				MADE:	STEP IN		
Tares Visus	Green and Ale	Commence of the Commence of th					
		SECTION I	X SPE	CIAL PRECAL	JTIONS		
PRECAUTIONS TO B	E TAKEN IN MANDLING AN	O STORING					
Extremely	flammable and	very vola	tile	Use in wel	l ventila	ted areas.	
Use good p	ersonal hygie	ne.					
			7 × 65 × 61	1 1-6 313941 6	7 62914 545 #4	** * * *****	DATA CONSTRUCT
	-11 011 0			- 1	*********	* \$ 1/**********************************	
1 Aprillaging and desired proposed participation of the second contract of the second contr	ell Oil Compa oduct Safety		CP		1 '-C' 41 1FO+1 8	W	"TO "VENDER 199 += 101
	1 & Chemical		-	1 405 " SHALL" #8	[400# ASS. WES 4	* ** ** *** ** ** ** ** ** ** ** ** **	100 . MUNT TO VENDES
		1 Todac cs			# # PRUE. WA'E. P	** **** ** ****	****
DATE UC	tober 1978	-	-	MORE ISABLE AS	30MES THE R 34		MATERIAL

MATERIAL SAFETY DATA SHEET

(Approved by U.S. Department of Labor "Essentially Similar" to Form LSB-00S-4)

NPVLA 0-/U

Marie Control of the 149 ... 11 Section I NUPACTURER'S NAME Tennessee Eastman Company STREET ADDRESS CITY, STATE, AND ZIP CODE Kingsport, Tennessae 37662 EMERGENCY TELEPHONE NO. 615-247-0411 CHEMICAL NAME AND SYNONYMS. TRADE NAME Methyl Ethyl Ketone, 2-Butanone MEK CHEMICALITANILY FORMULA CH3COC2H5 PAINTS, PRESERVATIVES, & SOLVENTS CATALYST . ADDITIVES OTHERS HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES . .: 2 SPECIFIC GRAVITY (H,O=1) 0.8061 3 20/20°C APOR PRESSURE (mm Hg.) 100 PERCENT VOLATILE and the state of EVAPORATION RATE APOR DENSITY (AIR=1) 5.7 (n Butyl Acetate ml COLUBILITY IN WATER by wt . 8 20 C 26.8 Molecular 72.10 Weight Clear liquid; non-residual Section IV -FLAMMABLE LINITS ASH POINT (METHOD USED) 22°F Tag Open Cup 7INGUISHING MEDIA Carbon Dioxide or Dry Chemical CIAL FIRE FIGHTING PROCEDURES ... HORE .: MUSUAL FIRE AND EXPLOSION HAZARDS NODE

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38 Table 1	Control of the Control of the	·	i company of the	STATE OF STATES
	Section V -	HEALTH' HA	ZARD DATA	
SHOLD LIMIT VALU	200 parts per million	Security of the second	or and attentional and a state of the state	
EFFECTS OF OVEREXPOSE	Irritation of nose, thros			
	initiation of hose, three	c, eyes		
Ic tale materia	1 a sensitizer?			The state of the s
EMERGENCY AND FIRST A	ID PROCEDURES	in triant av	mptomatically. Plush skin	grand directly by the second
And the second			vallowed, induce voniting.	Comment of the state of
				zarówa wito
Symposius (Signification)		Water Belleville		en en Constitución de la constit
	Section V	REACTIVI	TY-DATA	
STABILITY	UNSTABLE	ONDITIONS TO AVO	None	STATES PROPERTY.
4.1 (2.0 v. 15) 15	STABLE			
NC OMPATABILITY (Mater	None			man dated
HAZARDOUS DECOMPOSIT	None None			Marina and the
100 AS A SAN AC				2010年11日第
AZARDOUS	MAY OCCUR	CONDITION	S TO AVOID	
AND 10 10 10 10 10 10 10 10 10 10 10 10 10	WILL NOT OCCUR		The second secon	13.14 13.77 to \$4.50 to
- 1 W			PROCEDURES	
	Section VII - SPI	LL OH LEAK	PHOCEDURES	3 3
Eliminate	all sources of ignition. F	lush with was	ter.	The second second second
- 1,0 grant 10,0			The second secon	And the second s
VASTE DISPOSAL METHOD			The second secon	Vice and an invitation of the control of the contro
VIII 11 11 11 11 11 11 11 11 11 11 11 11	Automize into an inciner	stor.	The state of the supplied to the supplied to the state of	A series of the
2.1 (1) (1) (2) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4				Company of the control of the contro
3540203000000000000000000000000000000000	and the second of the second of the second		and the state of t	the state of the s
MAIGH MAINE	Section VIII - SPECIA	L PROTECT	ION INFORMATION	
SPIRATORY PROTECTION	(Specify type)	ALL STREET		SALANDAR MANAGE
ENTILATION	LOCAL EXHAUST . X		SPECIAL NOME	
	MECHANICAL (General)		OTHER NONe	MARKENDA
TOTECTIVE GLOVES: Rub	her	EYE PROTEC	TION safety glasses/face s	nield
THER PROTECTIVE EQUIPM	FNT Hone	4	or the sign of the first of the sign of the	Light Hilly Sale
The object of the second		†		
A Calletter of the second			a a secondario de Pala Laborito de Sandal de Pala Companya de Pala de	en librarian in the
	Section IX —	The Art of the Control of the Contro	ECAUTIONS	
a telepara a telepara a			with adequate ventilation	Karana Asi
HER PRECAUTIONS	d or repeated contact with	skin and repe	sated breathing.	**
THE PRECAUTIONS			the Manager than the second	
<u> </u>		1,000		
			ના જાઓપાસના તે છે. જે જે છે જે જોઈ છે. જે જોઈ	on in the public of the

Copper Brass Sales

MATERIAL SAFETY DATA SHEET MICARTA

COMPANY	ISSUE DATE	IDENTIFICATION NUMBER	
Copper and Brass Sales, Inc. 17401 Ten Mile Road East Detroit, Michigan 48021	November 25, 1985	N/A	
TRADE NAME (Common Name or Synonym)	EMERGENCY F	PHONE NUMBER	
Micarta	313-77	75-7710	
CHEMICAL NAME	FORMULA Glass cloth, paper, silicon, phenolic, melamine opoxy composite	DOT IDENTIFICATION NUMBER N/A	,

SECTION	N II —	- HAZAI	RDOUS INGREDIENTS			
PAINTS, PRESERVATIVES, & SOLVENTS		TLV (Units)	. ALLOYS AND METALLIC CO	DATINGS	. %	TLV (Units)
PIGMENTS N/A			BASE METAL	N/A		
.CATALYST N/A			ALLOYS	N/A		
VEHICLE N/A			METALLIC COATINGS	N/A		
SOLVENTS N/A			FILLER METAL PLUS COATING OR CORE FLUX	N/A		
ADDITIVES N/A			OTHERS	N/A		
OTHERS N/A						
HAZARDOUS MIXTUR	HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES					
. N/A			,			
F	· · · · · · · · · · · · · · · · · · ·					
Part March						

VII.4	SECTION III - F	PHYSICAL DATA			. (*
BOILING POINT (°F.) N/A		SPECIFIC GRAVITY (H2O = 1)	N/A		
VAPOR PRESSURE (mm Hg.) N/A		PERCENT, VOLATILE BY VOLUME (%)	N/A	-	
VAPOR DENSITY (AIR = 1) N/A		EVAPORATION RATE	N/A		
SOLUBILITY IN WATER N/A					

SECTION IV - FIRI	E AND EXPLOSION HAZARD DATA	Ą	g.*
FLASH POINT (Method used) N/A	FLAMMABLE L'MITS	Lol	Uel
EXTINGUISHING MEDIA CO2 water foam - same as for wood fire.			<u>;'</u>
SPECIAL FIRE FIGHTING PROCEDURES Same as for wood fire - Do not breathe fum	es from burning laminate.		6 ml 1
 A control of the contro			
UNUSUAL FIRE AND EXPLOSION HAZARDS No explosion hazards			7.74 1740
The second secon			- M - 12

year engine in the symmetime of

	SE	CTION	V - HEA	LTH HAZ	ARD DATA
THRESHOLD LIMIT VALUE	N/A				
EFFECTS OF OVEREXPOSU					
				<u></u>	
EMERGENCY AND FIRST AND		V Cause	ekin irrita	tion Mach	exposed skin with soap and water.
Froidinged Skill ex	posure to dust ma	y cause	Skiii iiiika	uon. vvasn	Pauli alla and alla
					Later magarast (A. C.) agree
•				· · · · · · · · · · · · · · · · · · ·	
:	(SECTIO	N VI - R	EACTIVIT	Y DATA
STABILITY	UNSTABLE		CONDITIONS	TO AVOID	N/A Aivi
i i	STABLE	X	· .		N/A
INCOMPATABILITY (Materials	to avoid)				
HAZARDOUS DECOMPOSITION	ON PRODUCTS Xious odor produce	d if over	heated		
1	MAY OCCUR	u ii over	neateu.	CONDITIONS.	
HAZARDOUS POLYMERIZATION	WILL NOT OCC	 CUR	X		N/A,
				L	AM 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1		··	· ·		
				OR LEAK	PROCEDURES
STEPS TO BE TAKEN IN CAS	SE MATERIAL IS RELEASED	OR SPILLE	D		N/A
	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
•					
WASTE DISPOSAL METHOD		egulation	ns for dis	posal of the	rmoset laminates - solids.
L.	State and receran	oguiation	10 101 010	poodi or the	Three transmitted bonds.
i ·					
!					
		/III - SP	ECIAL F	PROTECTI	ON INFORMATION
	n-toxic particle mas	k when i	machining	7.	
VENTILATION	LOCAL EXHAUST				SPECIAL
	MECHANICAL (General) Dust collector v	entilation	n system		OTHER N/A
PROTECTIVE GLOVES Ordinary gloves				Safety	lasses while machining.
OTHER PROTECTIVE EQUIP	MENT				्रक्षी (१३० - ४४४१ म - १५५५)
					Start English While areas
PRECAUTIONS TO BE TAKE			X - SPE	CIAL PRE	CAUTIONS CONTRACTOR OF THE CONTRACTOR OF THE CASE
Use correct saw I	blade, blade RPM	and feed	speed to	prevent ov	erheating of thin laminates - use wet saw
for laminates over	r 1" thick - use eye	protecti	ion.		- 196 - 196
OTHER PRECAUTIONS Use good dust co	ollecting system. Us	se ordina	ıry precat	itions as in	sawing or machining of wood and similar
materials.					And the second of the second o
The conditions or metho reasons, we do not assume use or disposal of the productions.	ing the accuracy or correct ds of handling storage, use responsibility and expressly duct.	iness. e and dispos y disclaim lial	al of the proc bility for loss,	luct are beyond damage or exper	our control and may be beyond our knowledge. For this and other as arising out of or in any way connected with the handling, storage, es, Inc., 17401 Ten Mile Rd., E. Detrolt, MI 48021.

MATERIAL SAFETY DATA SHEET

TOOLTEX® SOLUBLE OIL

Rev. Date 12/12/84



ARCO PETROLEUM PRODUCTS COMPANY DIVISION OF ATLANTIC RICHFIELD COMPANY 515 SOUTH FLOWER STREET LOS ANGELES, CALIFORNIA 90071

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers, and users of this product

Trade Name	TOOLTEX SOLUBLE OIL	İ		Telephoné Numbers EMERGENCY
Other Names , EMULSIFIABLE CUTTING EMULSIFIABLE METAL-V				800/424-9300 CHEMTREC 312/210-3000 COMPANY CUSTOMER SERVICE 213/486-8258 INFO ONLY
Chemical Family	PETROLEUM HYDROCARBONS	AND ADDITIVES;		rials Proper Shipping Name A "HAZARDOUS MATERIAL"
Generic Name	METAL-WORKING OIL		DOT Hazard Class NOT REGULATED	•
CAS No.		Company 1740017400	UN/N	A ID No.

Summary of Hazards

CAUTION NO PROPERTY -ผลส พฤสิจิ (พิวิธียา)

USE WITH ADEQUATE VENTILATION AND AVOID BREATHING HIGH CONCENTRATIONS -----OF MISTS OR VAPORS.

AVOID EYE CONTACT AND PROLONGED OR REPEATED SKIN CONTACT. SLIGHTLY COMBUSTIBLE! OSHA/NFPA CLASS-IIIB COMBUSTIBLE LIQUID.

1041123

Fire and Explosion III

Maca du din di

Almid Mark

Flammable Limits (% Vol. in Air) Flash Point (Method) Autoignition Temperature (Method) SHA (HD-92) AΡ 700° F 300° F Lower N/AP Upper N/AP BASED ON PETROLEUM COMPONENTS

SEE FIREFIGHTING PROCEDURES

THE FLASH POINT DISPLAYED ABOVE REFERS TO ONLY THE PETROLEUM COMPONENTS OF Fire and THIS PRODUCT. WHEN HEATED ABOVE ITS FLASH POINT (AP 300° F.). THIS MATERIAL Explosion WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN OR BE EXPLOSIVE IN CONFINED Hazards SPACES IF EXPOSED TO A SOURCE OF IGNITION. MISTS OR SPRAYS MAY BE FLAMMA-BLE AT LOWER TEMPERATURES. KEEP AWAY FROM EXTREME HEAT AND OPEN FLAME.

Extinguishing Media

Unusual

DRY CHEMICAL AND CO2. FOAM AND WATER FOG ARE EFFECTIVE BUT MAY CAUSE FROTHING.

THIS PRODUCT CONTAINS A SMALL AMOUNT OF WATER AND IT IS EMULSIFIABLE IN WATER WITH AGITATION: FOR FIRES INVOLVING THIS MATERIAL, DO NOT ENTER ANY Special ENCLOSED OR CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT. THIS Firefighting MAY INCLUDE SELE-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST THE Procedures HAZARDOUS EFFECTS OF COMBUSTION PRODUCTS AND DXYGEN DEFICIENCIES IF FIRE-FIGHTERS CANNOT WORK UPWIND TO THE FIRE, RESPIRATORY PROTECTIVE EQUIPMENT MUST BE WORN COOL TANKS AND CONTAINERS EXPOSED TO FIRE WITH WATER.

(Y.	Health Hazards
rimary jazard	SKIN IRRITATION FROM PROLONGED AND/OR REPEATED EXPOSURES AND LACK OF PERSONAL HYGIENE.
ROUTE OF EX	POSURE SIGNS AND SYMPTOMS
nhalation	BREATHING OF MIST OR VAPORS MAY CAUSE MUCOUS MEMBRANE OR UPPER RESPIRATORY TRACT IRRITATION.
iye Sontact	EYE IRRITATION MAY RESULT FROM MISTS AND/OR CONTACT WITH LIQUID
Skin Absorption	NO SIGNIFICANT ADVERSE EFFECTS ARE EXPECTED TO OCCUR UPON SHORT TERM EXPOSURE.
Skin rritation	PROLONGED OR REPEATED SKIN CONTACT WITH SIMILAR MATERIALS HAS PRODUCED BATTLE UNA SLIGHT IRRITATION AND INFLAMMATION.
ngestion	THIS MATERIAL MAY BE IRRITATING TO THE DIGESTIVE TRACT.
Effects Of Overexposure	CONTACT OF THE OIL WITH EYES MAY RESULT IN SLIGHT EYE IRRITATION (8) DATASON - LASSIN PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION AND/OR MORE SERIOUS SKIN DISORDERS.
V.	Protective Equipment
Respiratory	THIS MATERIAL IS NOT EXPECTED TO PRESENT A RESPIRATORY HAZARD BECAUSE OF 100 100 100 100 100 100 100 100 100 10
Ventilation	USE ADEQUATE VENTILATION TO KEEP MISTS AND VAPORS OF THIS MATERIAL BELOW THE APPLICABLE EXPOSURE GUIDELINE(S)/STANDARD(S). THIS MATERIAL BELOW (SEE SECTION VI. "OCCUPATIONAL EXPOSURE LIMITS")
Ξγe	EYE PROTECTION (CHEMICAL-TYPE GOGGLES AND/OR FACE SHIELD) SHOULD BE WORN WHENEVER THERE IS A LIKELIHOOD OF SPLASHING OR SPRAYING LIQUID. CONTACT LENSES SHOULD NOT BE WORN. EYE WASH WATER SHOULD BE PROVIDED.
Skin	AVOID PROLONGED AND/OR REPEATED SKIN CONTACT. IF CONDITIONS OR FREQUENCY OF USE MAKE CONTACT UNAVOIDABLE, CLEAN AND IMPERVIOUS PROTECTIVE CLOTHING SUCH AS GLOVES. APRON, BOOTS, AND FACIAL PROTECTION SHOULD BE WORN.
Other	EMERGENCY EYE WASH FOUNTAINS SHOULD BE AVAILABLE IN THE VICINITY OF ANY POTENTIAL EXPOSURE, AND A SAFETY SHOWER SHOULD ALSO BE AVAILABLE IF ATHERON AND ASSETS MATERIAL IS BEING HANDLED HOT. (SEE SECTION XI HANDLING AND STORAGE.)
VI.	Occupational Exposure Limits
1. Substa	nce Source of Galacida to Made To Control MIST, MINERAL (SEE SECTION XI.) Source of Galacida to Made
Exposure Limit	f_{ab}
	MG/M3 / B HOURS 10 MG/M3 / 15 MINUTES: 00 GMA (ADIMOHO COA
2. Substa	OIL MIST, MINERAL (SEE SECTION XI.) Source OSHATANOO KOMMON OI FEEDER 1984
Exposure Limit	Value/Time Short Term Limit/Time Peak: Limitation of the Short Term Limit/Time MG/M3 / B HOURS



TOOLTEX® SOLUBLE OIL

MSDS No. APPC 447 Rev. Date 12/12/84

1.00

VIL	Emergency and First Aid		
Inhalation	VAPORIZATION IS NOT EXPECTED AT AMBIENT TEMPERATURES; BUT SHOULD INHALATION OCCUR, IMMEDIATELY REMOVE PERSONNEL FROM CONTAMINATED AREA TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF THERE ARE SIGNS OF BREATHING DIFFICULTIES.		e e e e e e e e e e e e e e e e e e e
Eye Contact	ELUSH EYES WITH CLEAN, LOW-PRESSURE WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE EYELIPS. IF PAIN OR REDNESS PERSISTS AFTER FLUSHING, OBTAIN MEDICAL ATTENTION.		(49)
Skin Contact	REMOVE BY WIPING: THEN WASH SKIN THOROUGHLY WITH PLENTY OF SDAP AND WATER. REMOVE CONTAMINATED CLOTHING AND THOROUGHLY CLEAN BEFORE REUSE.		2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Ingestion	IF MORE THAN A HALF-CUP FULL OF THIS MATERIAL IS SWALLOWED, GIVE QUANTITIES OF WATER, INDUCE VOMITING, AND PROMPTLY OBTAIN MEDICAL ATTENTION.		
Note to Physician	OTHER THAN DESCRIBED ABOVE, NO ADDITIONAL EMERGENCY TREATMENT IS NECESSARY.	:	

VIII.

Spill and Disposal

Precautions if Material is Spilled or Released

CONTAIN SPILL AND PREVENT IT FROM ENTERING ALL WATER BODIES, IF POSSIBLE SAFELY STOP FLOW OF SPILL. EVACUATE NON-ESSENTIAL PERSONNEL FROM IMMEDIATE SPILL AREA DUE TO SLIPPING HAZARDS. IN URBAN AREA, CLEANUP AS SOON AS POSSIBLE: IN NATURAL ENVIRONMENTS, CLEANUP ON ADVICE FROM ECOLOGISTS. THE MATERIAL WILL FLOAT ON WATER. ABSORBANT MATERIALS AND PADS CAN BE USED. NOTIFY THE NATIONAL RESPONSE CENTER (800/424-8802) AND COMPLY WITH ALL APPLICABLE LAWS. THE SPILLED MATERIAL AND ANY WATER OR SOIL WHICH IT HAS CONTACTED MAY BE HAZARDOUS TO ANIMAL/AQUATIC LIFE.

Waste Disposal Methods

MAXIMIZE PRODUCT RECOVERY FOR REUSE OR RECYCLING. CONDITIONS OF USE MAY CAUSE THIS MATERIAL TO BECOME A "HAZARDOUS WASTE" AS DEFINED BY STATE OR FEDERAL LAWS. USE APPROVED TREATMENT, TRANSPORTERS, AND DISPOSAL SITES IN COMPLIANCE WITH ALL LAWS. IF SPILL IS INTRODUCED INTO A WASTEWATER SYSTEM, THE CHEMICAL AND BIOLOGICAL DXYGEN DEMAND WILL LIKELY INCREASE. PROPE ACCLIMATE THE BIOMASS TO THE SPILL MATERIAL. POTENTIAL TREATMENT AND PROPERLY DISPOSAL METHODS INCLUDE LAND FARMING, INCINERATION, AND LAND DISPOSAL, IF PERMITTED.

Component Name	CAS No.		Composition amount (See Note on Page 4	
HYDROTREATED HEAVY NAPHTHENIC DISTILLATE (PETROLEUM)	64742-52-5*	GT	85 PERCENT	
EMULSIFIER(S)		· AP	7 PERCENT	
SOLVENT-DEWAXED HEAVY PARAFFINIC DISTIL- LATE (PETROLEUM)	64742-65-0*	LT	5 PERCENT	
SURFACTANT(S)		LT	2 PERCENT	•
WATER	7732-18-5	LT	1 PERCENT	

Compositions given are typical values, not specifications.

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lo ling Poli		Evaporation Rate (Ratio of Tir	ne)	la de deserva	Dry Point	and the second s
r ezing Po	int	Vapor Pressure (MM HG AT 70°F) LT	0.1	100	Volatile Cha	
ipacific Gr	avity $(H_{*}O = 1 \text{ at } 39.2^{\circ}F)$	Vapor Sp. Gr. (Air = 1.0 at 60° GT 10	- 90°F) Solu	ibility in Wat MULISIFIES:	STABL	Eyopana mina
	Polymerization TED TO OCCUR	Viscosity Units, Temp., Methodap 165 SUS A	d AT 100°F D:		PH N/DA	*1845 1 Q
Other Physi	cal TYPICAL al Properties TYPICAL	WATER CONTENT = AP 0.7 WT KINEMATIC VISCOSITY = 36 (% (ASTM D	1744)	P. S. STATISTICS OF STATES	Carrier State
In Jearance	CREAM-CO	LORED LIQUID: LUBE OIL ODG	OR.		Solve Market	Sarth Lancia, and a company of the company
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x (.		Additional Pre	caution			
fandling ind Storage	WATER BEFORE EATING A SHOWER AFTER WORK HARSH ABRASIVE SKIN	YGIENE PRACTICES. WASH HA DRINKING, SMOKING, DR US DO NOT USE SOLVENTS (GA CLEANERS FOR WASHING EXPORT BEFORE REUSE. DISCARD (SE OF TOIL ASOLINE, K DSED SKIN.	ET FACILITI EROSENE, ET REMOVE DI	ES. TAKE C.) OR L-SOAKED GLOVES AND	dag a stala Markasa Marka Markasa Markasa Markasa Markasa Markasa Markasa Markasa Marka Markasa Markasa Markasa Markasa Markasa Markasa Markasa Marka Markasa Markasa Markasa Markasa Marka Ma Marka Marka Marka Marka Marka Ma Marka Ma Marka Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma
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MATERIAL SAFETY DATA SHEET

I. MATERIAL IDENTIFICATION

Name: Conoco Super Hydraulic Oil 22, 32, 46, 68

Conoco Product Code: 7447/7448/7449/7450

Synonyms: Petroleum Hydraulic Oil

Chemical Family: Petroleum Hydrocarbon

Manufacturer: Conoco Inc.

Address: P.O. Box 1267, Ponca City, OK 74603

CAS Registry No.: Mixture Transportation Emergency No.: (800) 424-9300 (Chemtrec) Product Information No.:

(405) 767-6000

II. HAZARDOUS INGREDIENTS

HAZARD DATA

Hazard Determination:

Health Effect Properties: None.

Not applicable.

Physical Effect Properties:

Product/Mixture: None.

Not applicable.

III. PHYSICAL DATA

Appearance and Odor: Brown liquid; mild petroleum hydrocarbon odor.

Boiling Range (Deg.F) 650-1060

Specific Gravity (H2O=1)

0.86

Vapor Pressure (mmHg) Vapor Density (Air=1) Nil

% Volatile (by volume)

Nil

Not Applicable

Evaporation Rate (=1)

Nil

Solubility in Water

Insoluble

IV. REACTIVITY DATA

Stable: X Unstable:

Hazardous Decomposition Products: Normal combustion forms carbon dioxide. Incomplete combustion may product carbon monoxide.

Conditions To Avoid: Strong oxidizing materials, heat, flame.

Hazardous Polymerization: Will not occur.

V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): 285F (PM) Autoignition Temperature: 650F Handle and store in accordance with NFPA procedure for Class III B Combustible Liquid.

Extinguishing Media: Use water spray, dry chemical, foam, or carbon dioxide.

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

National Fire Protection Agency (NFPA) CLASSIFICATION HAZARD RATING
Health 0 Fire 1 Reactivity 0 Least - 0 Slight - 1 Moderate - 2
High - 3 Extreme - 4

VI. TRANSPORTATION AND STORAGE

DOT HAZARD CLASS: Not Applicable

Precautions To Be Taken In Handling And Storing: Product is Class III B Combustible Liquid per NFPA Code No. 30-1984. Store and handle accordingly.

Shipping Paper Description: Not D.O.T. Regulated.

Placard: Not D.O.T. Regulated.

Label: Not D.O.T. Regulated.

VII. HEALTH HAZARD INFORMATION

PEL Not Established TLV Not Established
Ceiling Value Not Established AEL Not Established

Primary Route of Exposure/Entry: Skin.

Signs and Symptoms of Exposure/Medical Conditions Aggravated By Exposure:
No adverse health effect has been identified specifically for this product.
Health effect information from animal and human studies has been included on related materials, even though health experts may disagree as to the significance of this data.

Mouse skin painting studies have shown that highly solvent-refined petroleum distillates having a boiling point below 700F, and which are similar to ingredients in this product, have not caused skin tumors. Studies of petroleum workers have not shown a significant increased incidence of skin tumors.

VII. HEALTH HAZARD	INFORMATION	(continued)

The product may cause irritation to eyes, lungs, or skin after prolonged or repeated exposure.

Listed as Carcinogen or Potential Carcinogen by: NTP No IARC No OSHA No

VIII. EMERGENCY AND FIRST AID PROCEDURES

Eyes: Immediately wash with fresh water for at least 15 minutes and get medical attention.

Skin: Remove contaminated clothing as soon as possible. Wash exposed skin thoroughly with soap and water. If irritation persists, consult a physician.

Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

- Inhalation: If overexposure occurs, remove individual to fresh air. If breathing stops, administer artificial respiration.
- Ingestion: If this material is swallowed, do not induce vomiting. If vomiting begins, lower victim's head in an effort to prevent vomitus from entering lungs. Immediately consult a physician. Do not attempt to give liquid to an unconscious person.
- Note to Physicians: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL PROCEDURES

RCRA HAZARDOUS WASTE: Yes No X

- In Case Of Spill Or Leak: Contain spill immediately in smallest area possible. Recover as much of the product itself as possible by such methods as vacuuming, followed by soaking up residual fluids by use of absorbent materials. Remove contaminated items including soils and place in proper container for disposal. Avoid washing, draining or directing material to storm or sanitary sewers.
- Waste Disposal Method: Recycle as much of the recoverable product as possible.

 Dispose of nonrecyclable material by such methods as controlled incineration, complying with federal, state and local regulations.

X. PRECAUTIONARY MEASURES

Respiratory Protection: None required except under unusual circumstances such as described in Section V.

Ventilation: Normal shop ventilation.

Protective Gloves: Impervious.

Eye Protection: Safety glasses with side shields.

Other Protective Equipment: Coveralls.

The above data is based on tests and experience which Conoco believes reliable and are supplied for informational purposes only. CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.

VERRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): 340F (PMCC) Autoignition Temperature: 650F Handle and store in accordance with NFPA procedure for Class III B Combustible Liquids.

Extinguishing Media: Use water spray, dry chemical, foam, or carbon dioxide.

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

National Fire Protection Agency (NFPA) CLASSIFICATION HAZARD RATING Health O Fire 1 Reactivity O Least - 0. Slight - 1 Moderate - 2 High - 3 Extreme - 4

VI TRANSPORTATION AND STORAGE DOT HAZARD CLASS: Not Applicable

Precautions To Be Taken In Handling And Storing: Product is Class III B Combustible Liquid per NFPA Code No. 30-1984. Store and handle accordingly.

Shipping Paper Description: Not D.O.T. Regulated.

Placard: Not D.O.T. Regulated.

D.O.T. Label: Not Regulated.

OSHA Label (Recommended): CAUTION: Prolonged or repeated skin contact with used motor oil may be harmful. Wash thoroughly with soap and water after use.

VII. HEALTH HAZARD INFORMATION

TLV Not Established PEL Not Established AEL Not Established Ceiling Value Not Established

Primary Route of Entry: Skin.

Signs and Symptoms of Exposure/Medical Conditions Aggravated By Exposure: No adverse health effect has been identified specifically for this product. Health effect information from animal and human studies has been included on related materials, even though health experts may disagree as to the significance of this data.

Mouse skin painting studies have shown that highly solvent-refined petroleum distillates having a boiling point below 700F, and which are similar to ingredients in this product, have not caused skin tumors. Studies of petroleum workers have not shown a significant increased incidence of skin tumors.

CAS Registry No.: Mixture

VII HEALTH HAZARD INFORMATION (continued)

The product may cause irritation to eyes, lungs, or skin after prolonged or repeated exposure.

Laboratory studies have shown that mice developed skin cancer following repeated skin application of, and continuous exposure to, used motor oil. In these studies, the used motor oil was not removed between applications. Health hazards to used motor oil can be minimized by avoiding prolonged skin contact.

Listed as Carcinogen or Potential Carcinogen by: NTP NO IARC NO OSHA No

VIII EMERGENCY AND FIRST AID PROCEDURES

Eyes: Immediately wash with fresh water for at least 15 minutes and get medical attention.

Skin: Remove contaminated clothing as soon as possible. Wash exposed skin thoroughly with soap and water. If irritation persists, consult a physician.

Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

If exposed to <u>hot oil</u>, immediately cool with cold water. Do not attempt to remove oil but continue to cool exposed areas with cold packs and seek medical attention.

Inhalation: If overexposure occurs, remove individual to fresh air. If breathing stops, administer artificial respiration.

Ingestion: If this material is swallowed, do not induce vomiting. If vomiting begins, lower victim's head in an effort to prevent vomitus from entering lungs.

Immediately consult a physician. Do not attempt to give liquid to an unconscious person.

Note to Physicians: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL PROCEDURES

RCRA HAZARDOUS WASTE: Yes ____ No X

In Case Of Spill Or Leak: Contain spill immediately in smallest area possible.

Recover as much of the product itself as possible by such methods as vacuuming, followed by soaking up residual fluids by use of absorbent materials. Remove contaminated items including solids and place in proper container for disposal. Avoid washing, draining or directing material to storm or sanitary sewers.

Waste Disposal Method: Recycle as much of the recoverable product as possible. Dispose of nonrecyclable material by such methods as controlled incineration, complying with federal, state and local regulations.

CAS Registry No.: Mixture

Y PRECAUTIONARY MEASURES

Respiratory Protection: None required except under unusual circumstances such as described in Section V.

Ventilation: Normal shop ventilation.

Protective Gloves: None required.

Eye Protection: None required.

Other Protective Equipment: None required.

The above data is based on tests and experience which Conoco believes reliable and are supplied for informational purposes only. CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.



MATERIAL SAFETY DATA SHEET

TUM MATERIAL IDENTIFICATION

Name: Dectol R.O. 011s 32, 46, 68, 100 Conoco Product Code: 7302/7304/7306/7308

Synonyms: Petroleum Lubricating and Hydraulic Oil

Chemical Family: Petroleum Hydrocarbon Oil

: Manufacturer: Conoco Inc.

Address: P.O. Box 1267, Ponca City, OK 74603

Traffic Or Comme

CAS Registry No.: Mixture Transportation Emergency No.: (800) 424-9300 (Chemtrec) Product Information No.:

(405) 767-6000

II BHAZARDOUS INGREDIENTS

Hazard Determination:

Health Effect Properties: None.

Not applicable.

Physical Effect Properties:

Product/Mixture: None.

Not applicable.

III. PHYSICAL DATA

Appearance and Odor: Light brown liquid; mild petroleum hydrocarbon odor.

Boiling Point (Deg.F) 650-1200 Specific Gravity (H2O=1)

% Volatile (by volume) 'apor Pressure (mmHg) Nil Not applicable

Vapor Density (Air=1)

Insoluble Solubility in Water

Evaporation Rate (=1)

Nil

0.87

IV. REACTIVITY DATA

Stable: X Unstable:

Hazardous Decomposition Products: Normal combustion forms carbon dioxide. Incomplete combustion may produce carbon monoxide.

Conditions To Avoid: Strong oxidizing materials, heat, flame.

Hazardous Polymerization: Will not occur.

VE FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): 290F (PMCC) Autoignition Temperature: 680F(0 . 0.1) Ce 2000 | 10 20 20 Handle and store in accordance with NFPA procedure for Class (III) B. Combustible Liquid . Procedure the desiral resolution is a see quarte

Extinguishing Media: Use water spray, dry chemical, foam, or carbon dioxide at the first teach

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined toxic space without proper protective equipment including respiratory protection.

National Fire Protection Agency (NFPA) CLASSIFICATION
Health 0 Fire 1 Reactivity 0 Least - 0

HAZARD RATING

Health 0 Fire 1 Reactivity 0

Slight - 1 Moderate - 2

High - 3 Extreme - 4

VI.TRANSPORTATION AND STORAGE

DOT HAZARD CLASS: Not Applicable

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Precautions To Be Taken In Handling And Storing: Product is Class III B Combustible Liquid per NFPA Code No. 30-1984. Store and handle accordingly.

Shipping Paper Description: Not D.O.T. Regulated.

Placard: Not D.O.T. Regulated.

Label: Not D.O.T. Regulated.

VII. HEALTH HAZARD INFORMATION

PEL Not Established TLV Not Established Ceiling Value Not Established AEL Not Established

Primary Route of Exposure/Entry: Skin.

Signs and Symptoms of Exposure/Medical Conditions Aggravated By Exposure: No adverse health effect has been identified specifically for this product. Health effect information from animal and human studies has been included on related materials, even though health experts may disagree as to the significance of this data.

Mouse skin painting studies have shown that highly solvent-refined petroleum distillates having a boiling point below 700F, and which are similar to ingredients in this product, have not caused skin tumors. Studies of petroleum workers have not shown a significant increased incidence of skin tumors.

CAS Registry No.: Mixture

VII. HEALTH HAZARD INFORMATION (continued)

The product may cause irritation to eyes, lungs, or skin after prolonged or repeated exposure.

Listed as Carcinogen or Potential Carcinogen by: NTP No IARC No OSHA No

VIII EMERCENCY AND FIRST AID PROCEDURES

Eyes: Immediately wash with fresh water for at least 15 minutes and get medical attention.

Skin: Remove contaminated clothing as soon as possible. Wash exposed skin thoroughly with soap and water. If irritation persists, consult a physician.

Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

If exposed to <u>hot oil</u>, immediately cool with cold water. Do not attempt to remove oil but continue to cool exposed areas with cold packs and seek medical assistance immediately.

- Ingestion: If this material is swallowed, do not induce vomiting. If vomiting begins, lower victim's head in an effort to prevent vomitus from entering lungs. Immediately consult a physician. Do not attempt to give liquid to an unconscious person.
- Inhalation: If overexposure occurs, remove individual to fresh air. If breathing stops, administer artificial respiration.
- Note to Physicians: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL PROCEDURES

RCRA HAZARDOUS WASTE: Yes____ No_X

In Case Of Spill Or Leak: Contain spill immediately in smallest area possible. Recover as much of the product itself as possible by such methods as vacuuming, followed by soaking up residual fluids by use of absorbent materials. Remove contaminated items including soils and place in proper container for disposal. Avoid washing, draining or directing material to storm or sanitary sewers.

Waste Disposal Method: Recycle as much of the recoverable product as possible.

Dispose of nonrecyclable material by such methods as controlled incineration, complying with federal, state and local regulations.

CAS Registry No.: Mixture

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Respiratory Protection: None required except under unusual circumstances such as described in Section V.

Ventilation: Normal shop ventilation.

Protective Gloves: Impervious.

Eve Protection: Safety glasses with side shields.

Other Protective Equipment: Coveralls.

The above data is based on tests and experience which Conoco believes reliable and are supplied for informational purposes only. CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.



MATERIAL SAFETY DATA SHEET

T. H. MATERIAL UDENTIFICATION & LOS LOS LA COMPANION DE COMPANION DE LA COMPA

Name: Super-Sta Grease (All Grades)

Conoco Product Code: 9029/9030

Synonyms: Petroleum Grease

Chemical Family: Petroleum Hydrocarbon

Manufacturer: Conoco Inc.

Address: P.O. Box 1267, Ponca City, OK 74603

CAS Registry No.: Mixture Transportation Emergency No.: (800) 424-9300 (Chemtrec) Product Information No.:

(405) 767-6000

II. HAZARDOUS INGREDIENTS

HAZARD DATA

Hazard Determination:

Health Effect Properties: None.

Not applicable.

Bar Barrell Barrell Physical Effect Properties:

Product/Mixture: None.

Not applicable.

III. PHYSICAL DATA

Appearance and Odor: Green brown solid; Mild petroleum hydrocarbon odor.

Boiling Point (Deg.F)

750-1200

Specific Gravity (H2O=1)

0.89

rpor Pressure (mmHg) 🧈

Nil

% Volatile (by volume)

_por Density (Air=1)

Evaporation Rate (=1)

Nil N11

Solubility in Water

Not Applicable

Insoluble

IV. REACTIVITY DATA

Stable: X Unstable:

Hazardous Decomposition Products: Normal combustion forms carbon dioxide; incomplete combustion may produce carbon monoxide.

Conditions To Avoid: Strong oxidizing materials, heat. flame.

Hazardous Polymerization: Will not occur.

V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): 300F (PMCC) Autoignition Temperature: 700F Handle and store in accordance with NFPA procedure for Class III B Combustible Liquid.

Extinguishing Media: Use water spray, dry chemical, foam, or carbon dioxide.

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Products of combustion may contain carbon monoxide carbon dioxide, and other toxic materials. Do not entergenciosed confined that space without proper protective equipment including respiratory protection.

National Fire Protection Agency (NFPA) CLASSIFICATION

HAZARD RATING AND THEODY

Three as a first red time

医海巴氏征 电流电流 电影线电路线

Health 0 Fire 1 Reactivity 0

Least - 0 Slight - 1 Moderate - 2

High - 3 Extreme - 4

VI.TRANSPORTATION AND STORAGE

DOT HAZARD CLASS: Not Applicable

Precautions To Be Taken In Handling And Storing: Product is Class III B Combustibles and a Liquid per NFPA Code No. 30-1984. Store and handle accordingly. (Alice) Product is Class III B Combustibles and a Liquid per NFPA Code No. 30-1984.

Shipping Paper Description: Not D.O.T. Regulated.

Placard: Not D.O.T. Regulated.

Label: Not D.O.T. Regulated.

VII. HEALTH HAZARD INFORMATION

PEL Not Established TLV Not Established
Ceiling Value Not Established AEL Not Established

Primary Route(s) of Exposure/Entry: Skin.

Signs and Symptoms of Exposure/Medical Conditions Aggravated By Exposure:
No adverse health effect has been identified specifically for this product.
Health effect information from animal and human studies has been included on related materials, even though health experts may disagree as to the significance of this data.

Mouse skin painting studies have shown that highly solvent-refined petroleum distillates having a boiling point below 700F, and which are similar to ingredients in this product, have not caused skin tumors. Studies of petroleum workers have not shown a significant increased incidence of skin tumors.

CAS Registry No.: Mixture

VII HEALTH HAZARD INFORMATION (C				

The product may cause irritation to eyes, lungs, or skin after prolonged or repeated exposure?

Listed as Carcinogen or Potential Carcinogen by: NTP

IARC No

VIII EMERGENCY AND FIRST AID PROCEDURES

Eyes: Immediately wash with fresh water for at least 15 minutes and get medical attention.

Skin: Wash exposed skin thoroughly with soap and water. If irritation persists, consult a physician.

Inhalation: If overexposure occurs, remove individual to fresh air. If breathing stops, administer artificial respiration.

Ingestion: If this material is swallowed, do not induce vomiting. If vomiting begins, lower victim's head in an effort to prevent vomitus from entering lungs. Immediately consult a physician. Do not attempt to give liquid to an unconscious person.

...te to Physicians: Castric lavage by qualified medical personnel may be considered. depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL PROCEDURES

Salar Salar March Server 1 400 M. M. A. Carlotte, M. C. Carlotte, M. Company of the

RCRA HAZARDOUS WASTE:

In Case Of Spill Or Leak: Contain spill immediately in smallest area possible. Recover as much of the product itself as possible by shovel or mechanical means. Nonrecyclable product and contaminated soils and other materials should be picked up and placed in proper containers for storage and ultimate disposal. Avoid washing, draining or directing material to storm or sanitary sewers.

Waste Disposal Method: Recycle as much of the recoverable product as possible. Dispose of nonrecyclable material by such methods as controlled incineration, complying with federal, state and local regulations.

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BUT PRECAUTTONARY MEASURES

Respiratory Protection: None required except under unusual circumstances such to as described in Section V.

Ventilation: Normal shop ventilation.

Protective Gloves: None required.

Eye Protection: None required.

Other Protective Equipment: None required.

The above data is based on tests and experience which Conoco believes reliable and are supplied for informational purposes only. CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.

- Unocal ®

Product Name: UNOCAL MULTIPURPOSE ATF DEXRON (R) II
PRODUCT CODE NO: 03850 ISSUE DATE:

7/10/85

PAGE 1 OF

MANUFÁCTURER:

UNOCAL REFINING & MARKETING DIVISION UNION OIL COMPANY OF CALIFORNIA 1201 H. 6TH STREET. LOS ANGELES, CALIFORNIA 80017

CONTACT FOR FURTHER INFORMATION: MSDS COORDINATOR (213) 877-7588

Transportation Emergencies:
 Call CHEMTREC
 (800) 424-9300 Cont. U.S.
 (202) 483-7616 (Collect)
 from Alaska & Hawaii
Health Emergencies:
 CALL LOS ANGELES POISON
INFORMATION CENTER (24 hrs.)
 (213) 664-2121

PRODUCT IDENTIFICATION

PRODUCT NAME:

UNOCAL MULTIPURPOSE ATF DEXRON (R) II

SYNONYMS:

UNION MULTIPURPOSE ATF DEXRON (R) II.

GENERIC NAME:

TRANSMISSION OILS

CHEMICAL FAMILY: PETROLEUM HYDROCARBON

DOT. PROPER

SHIPPING NAME: "NOT APPLICABLE

ID NUMBER:

R: NONE

SECTION I - INGREDIENTS

TLY UNITS AGENCY

TYPE

OIL MIST, IF GENERATED

5.00 MG/M3 OSHA

FULL TERM THA

THE IDENTITIES OF INGREDIENTS THAT ARE TRADE SECRETS ARE EXCLUDED FROM THIS LIST, which the property of the secret secre

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

O LOSSTATERRY TOUGHT OF

EMERGENCY

Have physician call LOS ANGELES POISON
INFORMATION CENTER (24 hrs.) (213) 664-2121

EYE CONTACT:

FOR DIRECT CONTACT, FLUSH THE AFFECTED EYE(S) WITH CLEAN WATER. IF IRRITATION OR REDNESS DEVELOPS, SEEK MEDICAL ATTENTION.

SKIN CONTACT:

DO NOT USE GASOLINES, THINNERS OR SOLVENTS TO REMOVE PRODUCT FROM SKIN. WIPE MATERIAL FROM SKIN AND REMOVE CONTAMINATED CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH SOAP AND WATER AND, IF NECESSARY, A WATERLESS SKIN CLEANSER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF IRRITATION OF NOSE OR THROAT DEVELOPS, MOVE AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING OR IF BREATHING DIFFICULTIES DEVELOP, ARTIFICIAL RESPIRATION OR OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SHALLOWING):

IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2 TO 3 CUPS OF MILK OR HATER TO DRINK, SEEK MEDICAL ATTENTION. TO PHYSICIAN: EMESIS OR LAYAGE IS NOT RECOMMENDED FOR INGESTIONS OF MINUTE QUANTITIES OR TASTES OF MOST HYDROCARBONS. MEDICAL OPINION IS DIVIDED FOR LARGER INGESTIONS. EMESIS OR LAYAGE HAS BEEN RECOMMENDED FOR THOSE PETROLEUM PRODUCTS WHICH HAYE A HIGH ORAL TOXICITY. GASTRIC LAYAGE WITH A CUFFED ENDOTRACHEAL TUBE IS RECOMMENDED BY SOME PHYSICIANS TO PREVENT ASPIRATION.

Product Name: UNOCAL MULTIPURPOSE ATF DEXRON (R) II PRODUCT CODE NO: 03850 ISSUE DATE:

7/10/85

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CHERTICAL TRUDERY PEYROLSOIL BILL

THIS SUCHERS OF SMORTPHINE

15.5 等資格等的基準付款 ~ 13 日本土等書 38

Section : - inoredients

SECTION III - POTENTIAL ADVERSE HEALTH EFFECTS:

EYE CONTACT:

THIS MATERIAL MAY CAUSE EYE IRRITATION. DIRECT CONTACT MAY CAUSE BURNING TEARING AND REDNESS.

SKIN CONTACT:

THE POST OF PRINCIPLE OF THE PROPERTY OF THE P THIS MATERIAL MAY CAUSE SKIN IRRITATION, PROLONGED OR REPEATED CONTACT MAY CAUSE REDNESS, BURNING AND DERMATITIS.

INHALATION. (BREATHING)

EXPOSURE TO MISTS, OR PROLONGED OR REPEATED EXPOSURE TO FUMES OR WARDES THAT MAY BE GENERATED WHEN THIS MATERIAL IS HEATED, MAY CAUSE IRRITATION OF NOSE AND THROAT

INGESTION (SWALLOWING):

ACCIDENTAL" INGESTION OF THIS MATERIAL MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT.

SECTION IY - SPECIAL PROTECTION INFORMATION

YENTILATION:

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE IN MAINTAINING AIRBORNE TO THE TOTAL CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION 1), ADDITIONAL 104 134 YENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED.

RESPIRATORY PROTECTION:

IF AIRBORNE CONCENTRATIONS EXCEED RECOMMENDED EXPOSURE LIMITS, "A "SUITABLE FILTER-TYPE" RESPIRATOR SHOULD BE WORN. (SEE SECTION I.) ONLINE ST. 2F GRESSAFEC

PROTECTIVE GLOYES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN WORK AREA FOR FLUSHING EYES AND SKIN. BARRIER CREAMS THAT ARE SPECIFIC FOR OIL-BASED MATERIALS ARE RECOMMENDED WHEN GLOYES ARE IMPRACTICAL.

SECTION Y - REACTIVITY DATA

STABILITY:

STABLE

INCOMPATIBILITY (MATERIALS TO AVOID):

AVOID CONTACT WITH STRONG OXIDIZING AGENTS. EXTENDED EXPOSURE TO HIGH TEMPERATURES MAY CAUSE DECOMPOSITION.

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD MAJOR AMOUNTS OF OXIDES OF CARBON AND MINOR AMOUNTS OF OXIDES OF SULFUR AND NITROGEN.

(4) 付款保持、例、次年系的、企图或是设计的特别的创新的。

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7/10/85

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SECTION Y - REACTIVITY DATA

HAZARDOUS POLYMERIZATION :

HILL NOT OCCUR

SECTION VI - SPILL OR LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL

COLLECT LEAKING LIQUID IN SEALABLE CONTAINERS. ABSORB SPILLED LIQUID IN SAND OR INERT ABSORBANT. CONTACT FIRE AUTHORITIES AND APPROPRIATE STATE/LOCAL AGENCIES. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY COAST GUARD NATIONAL RESPONSE CENTER (PHONE NUMBER 800-424-8802).

HASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

STORE IN A COOL, DRY LOCATION. KEEP AHAY FROM INCOMPATIBLE MATERIALS (SEE SECTION Y). AYOID GENERATING OIL MISTS WHILE HANDLING. AYOID PROLONGED OR REPEATED SKIN CONTACT. HASH THOROUGHLY AFTER HANDLING. DO NOT WEAR OIL-SOAKED CLOTHING OR SHOES.

SECTION YIII - FIRE AND EXPLOSION HAZARD DATA

HAZARD RANKING

NFPA HAZARD	HEALTH HAZARD: FLAMMABILITY:	1.		L =	LEAST SLIGHT		DOT FLAMMABILITY CLASSIFICATION	 FLASH POINT
CLASS	REACTIVITY: OTHER:	Ð	;	3 =	MODERATE HIGH EXTREME	•	NOT REGULATED	160 F 320 C

EXTINGUISHING MEDIA:

EXTINGUISH WITH DRY CHEMICAL, CO2, WATER SPRAY, FOAM, SAND OR EARTH. WATER AND FOAM MAY CAUSE FROTHING.

FIRE & EXPLOSION HAZARDS:

THIS MATERIAL WILL BURN, BUT WILL NOT IGNITE READILY.

FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE USEFUL IN MINIMIZING YAPORS AND COOLING CONTAINERS EXPOSED TO HEAT AND FLAME. AYOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. MOYE UNDAMAGED CONTAINERS FROM FIRE AREA IF YOU CAN DO SO WITHOUT RISK.



MATERIAL SAFETY DATA SHEET

Flammability Rating 0 Health Rating Reactivity Rating

HAZARD RATING
Please rate consistent with NFPA Code

	. •	SECTION I NAMI	E AND PI	RODUCT	<u> </u>		•		
MANUFACTURER'S NAME	· · · · · · · · · · · · · · · · · · ·					CONTACT			
NORTON COMPANY						THOMAS	Z. RICHARD	S	
ADDRESS (STREET, CITY, STATE AN	ND ZIP CODE	2)				EMERGENC	Y TELEPHONE N	o	
1 NEW BOND STREET, WORCESTER, MA 01606-2698 617-795-2690									
TRADE NAME, COMMON NAME OR	SPECIFICAT	ION				APPROVED	71 71 1		
VITRIFIED BONDED – A	BRASIVE	PRODUCTS		·		DATE	6-20-8	36	
CHEMICAL FAMILY OR PRODUCT T	ÝPE.	ANY GRADE							
S	SECTION	II COMPOSITION F	PER 29CF	R 1910.1200	(G) (4)			
CHEMICAL NAME	MAX %	COMMON NAME	REG*	CAS ···	PEF	OSHA RMISSIVE SURE LIMIT	ACGIH TLV	CARCIN OGEN (Y/N)	
Alpha Alumina	96	Alundum	Y	1344-28-1		5mg/m³ otal Dust)	10mg/m³ (Total Dust)	N	
Silicon Carbide	96	Crystolon	. Y	409-21-2		5mg/m³ otal Dust)	10mg/m³ (Total Dust)	N	
No. 12 Treatment	23	Paraffin Wax	N	**NAIF		See Sec	tion VI .	N	
No. 5 & 6 Treatment	16	Rosin Wax Mixture	N	**NAIF		See Sec		N	
fur Treatment	41	Sulfur	Y	7704-34-9		*NAIF	**NAIF	N	
Note: Wheel Treatments range from						•			
 Materials are regulated by OSHA 29 C Regulations, 	FR 1910.120	0, Hazard Communication	Standard, an	d/or the Massachus	etts Gene	rel Law Chapte	er 111F, Right To b	(now	
	SECT	ION III PHYSICAL	L AND CI	HEMICAL DA	TA				
BOILING POINT **NAIF	·	MELTING POINT .	*NAIF			SPECIFIC G	RAVITY 2-4	:	
VAPOR PRESSURE **NAIF		PERCENT VOLATILE B	Y VOL **!	NAIF		VAPOR DE	NSITY "NAIF	:	
EVAPORATION RATE "NAIF		SOLUBILITY IN WATER	R Slight	•		SOLUBILIT	Y IN ALCOHOL *	NAIF	
SOLUBILITY IN OTHER SOLVENT	**NAIF			NCE AND ODOR ODUCT: MAY GI	VE OFF	ODOR IN USE			
	:	SECTION IV SPEC	IAL PRE	CAUTIONS					
PRECAUTIONS TO BE TAKEN IN HA	NDLING AN	ID STORAGE - NONE.		· · · · · · · · · · · · · · · · · · ·					
OTHER PRECAUTIONS: **NAIF.									
	SECTIO	N V CORROSIVIT	Y AND R	EACTIVITY	DATA		·		
STABILITY UNSTABLE	☐ STAB	LE 🖾 POLYMER	IZATION	MAY OCC	UR 🗆	WILL NOT	OCCUR 🖾		
INCOMPATABILITY (MATERIALS TO	O AVOID)		· · · · · · · · · · · · · · · · · · ·			····			
Avoid acids of all ty	ypes with a	PH <= 4.0							
OMPOSITION PRODUCTS									
use, dusts are generated. In months, wheel components. Coolants	nost cases, t may produc	he airborne material rer ce other decomposition	moved from products.	the workpiece v	will be si	gnificantly gr	reater than the gr	ind-	
CONDITIONS TO BE AVOIDED	 		·····				·	-	

*** N/A = NOT APPLICABLE

**NAIF

**NAIF = NO APPLICABLE INFORMATION FOUND

3	SECTION VI HEALTH, FIRST AID AND MEDI	CAL DATA
PRIMARY ROUTE(S) OF ENTRY	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND MEDICAL INFORMATION
INHALATION DURING GRINDING)	ACUTE: COUGHING, SHORTNESS OF BREATH. CHRONIC: MAY AFFECT BREATHING CAPACITY.	REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEED OBTAIN MEDICAL ASSISTANCE.
INGESTION (DURING GRINDING)	NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.	OBTAIN MEDICAL ASSISTANCE.
SKIN CONTACT & ABSORPTION (DURING GRINDING)	SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.	WASH AFFECTED AREAS WITH SOAP AND WATER. OBTAIN MEDICAL ASSISTANCE.
EYE (DURING GRINDING)	DUSTS MAY IRRITATE EYES.	WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.
OTHER POTENTIAL HEALTH RISKS (DURING GRINDING)	GRINDING MAY CREATE ELEVATED SOUND LEVELS WHICH MAY AFFECT HEARING.	OBTAIN MEDICAL ASSISTANCE.

SECTION VII STORAGE, HANDLING AND USE PROCEDURES

NORMAL STORAGE AND HANDLING SEE ANSI STANDARD 87.1.

NORMAL USE

HANDLE WITH ADEQUATE VENTILATION. SEE OSHA 29CFR1910.94 (VENTILATION) and 29CFR1910.1000 (AIR CONTAMINATES)

STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS. NORMAL CLEANUP PROCEDURES.

VASTE DISPOSAL METHOD

STANDARD LANDFILL METHODS CONSISTENT WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS PRODUCTS WITH LISTED FLOURIDES MAY HAVE SLIGHTLY SOLUBLE FLOURIDE SWARF.

SECTION VIII PERSONAL PROTECTION INFORMATION RESPIRATORY PROTECTION (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUST RESPIRATORS SEE OSHA 29CFR1910.134. VENTILATION LOCAL RECOMMENDED MECHANICAL RECOMMENDED (GENERAL) OTHER **NAIF PROTECTIVE GLOVES AS DESIRED BY USER RECOMMENDED SEE OSHA 29CFR1910.133 **EYE PROTECTION** AS NEEDED HEARING PROTECTION SEE OSHA 29CFR1910.215 (HEARING PROTECTION) OTHER EQUIPMENT MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CON-TACT WITH THIS MATERIAL. SEE SECTIONS VII & VIII

	SECTIO	N IX FIRE AND EXPLOSION HA	ZARD DATA	
FLASH POINT **NAIF		(METHOD USED ***N/A	FLAMMABLE LIMITS LEL N/A UEL **	**N/
EXTINGUISHING MEDIA	USE WATER	·		-
PECIAL FIRE FIGHTING P	ROCEDURES	NONE		7
EXPLOSION POTENTIAL	*NAIF			1

FOR COMPANY USE

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; now-ever, Norton Company makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.

U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration

Form Approved OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

portable toxing in After ander i		SECT	ON I			
MANUFACTURER'S NAME						
Prestex Products Co.	· 	·	646-4784			
ADDRESS (Number, Street, City, State, and ZIP Cod 1414 Carroll Ave. St	e) • I	Paul.	Minn. 55304			
CHEMICAL NAME AND SYNONYMS TRADE NAME AND SYNONYMS						
None P-X Glass cleaner						
None			Alcohol, Water, Ammonia			
SACASION	- -	HAZAR	DOUS INGREDIENTS		•	
	%	TLV		1	TLV	
PAINTS, PRESERVATIVES, & SOLVENTS	76	(Units)	ALLOYS AND METALLIC COATINGS	%	(Units)	
'PIGMENTS'			BASE METAL	ļ		
CATALYST			ALLOYS			
VEHICLE			METALLIC COATINGS			
SOLVENTS Alcohol alectics		·	FILLER METAL PLUS COATING OR CORE FLUX			
ADDITIVES			OTHER5	ł		
OTHERS Ammonia						
HAZARDOUS MIXTURES	OF (OTHER LIG	UIDS, SOLIDS, OR GASES	%	TLV (Units)	
•			,	<u> </u>		
				1		
				-		
Will be Market and		·		<u></u>	<u> </u>	
	TIO	N III - P	HYSICAL DATA	~~~~ ~	!	
BOILING POINT (°F.)],	75-212	SPECIFIC GRAVITY (H2O=1)		·866	
VAPOR PRESSURE (mm Hg.)	7	58 mm	PERCENT, VOLATILE BY VOLUME (%)	1	60%	
VAPOR DENSITY (AIR=1)	1.	4.24	EVAPORATION RATE		:	
SOLUBILITY IN WATER	C	omplet	•		Λ.	
APPEARANCE AND ODOR COLOTIES	s,	punge	nt			
OCOTION!!!!	EID	7 AND 7	VDI OCIONI LIA ZA DO DATA			
SECTION IV -	FIK	E AND E	XPLOSION HAZARD DATA			
FLASH POINT (Method used) 78 F Clos	ed	cup	FLAMMABLE LIMITS Lol	1-	Uel j	
Dry Chemica			chol type foam		! !	
SPECIAL FIRE FIGHTING PROCEDURES [Jse water snray to cool	fi:	re exp	osed surfaces and to prote	ct		
fire fighting personnel		 				
unusual fire and explosion Hazards Respiratory protection r	eq	uirėd .	for fire fighting personne	1		

		95	CTION V	LICA	TH HAZARD D	DATA	
THRESHOLD LIMIT							-1
EFFECTS OF OVERE	CADUCITOR	= -				portion mot the water)	-4
						quid will damage eye	
<u> </u>				ated, a	skin contac	t may be irritating.	
EMERGENCY AND F	hy ve	PROCEDUI	res <u>remove</u>	to ti	esh air an	d-if-breathing stopped,	
						calm, call a physician.	
If eve conta	act oc	cours	Clush t	horou	hly with w). }.
}e saar saa a dheela						Pagarag Products Co.	<u>-</u>
<u> </u>		. (Soutes Number, Siesch (Sty. State, and AT.	
STABILITY	UNSTAB	ILE	C	ONDITION	S TO AVOID	ODON STANDARD STRUCTURE	(3)
1	STABLE	1	X	Not A	oplicable	MILES CONTRACTOR	
With cortain	<i>(Materials</i> n chen	to avoid)	such a	s Oxio	les. Anids.	and Hologens	
HAZARDOUS DECO	MPOSITIO	N PRODUC	TS				
HAZARDOUS	M	AY OCCUR		T	CONDITIONS TO	AVOID	
POLYMERIZATION	w	ILL NOT O	CCUR	X	Not appli	cable	
 	1			-l		Signature of the control of the cont	
						and the second	
		SECT	ION VII -	SPILL	OR LEAK PROC	CEDURES IndoctA convin	12
STEPS TO BE TAKE	N IN CAS	E MATERIA	AL IS RELEA	SED OR S	PILLED	tilate avoid electrica	
sparks and	Lame	es. we	ar comp	Tere	protective	clothing when near.	-
WASTE DISPOSAL N	VETHOD.	7 0 20 00 00	ananki k	3000	C water tha	n follow local regulati	1
for was				168 0.	water one	n 10110w 10car regulati	ons
101. Mas	UG GL	31/0341	•		· · · · · · · · · · · · · · · · · · ·	The state of the s	
	· 	·	·		·		الم
	SI	ECTION '	VIII - SPE	CIAL P	ROTECTION IN	VEORMATION	
RESPIRATORY PRO	TECTION	(Specify ty	pel			(2) Dept. State of the control of	
Use approv	ed res	Spirate EXHAUST	cry pro	4.00	•	ng in confined area.	4
VENTILATION	Not r	necess		large	areas	the process of the control of the co	Щ
	MECHA	nical (Ger spark	nroof			No open flames	
PROTECTIVE GLOV		404	•		EYE PROTECTION	N TENDER Y TIANGGERONG	
OTHER PROTECTIV					I RSUNTIA	not needed	-
usually	not ne	<u>eeded</u>	·		· · ·	the second secon	╩.
			COTIONIA			TONG DOG HOOD CHANGE TO THE TONG OF THE TO	$\overset{"}{\dashv}$
PRECAUTIONS TO I	BE TAKE			· · · · · ·	CIAL PRECAUT	I (UNS	1
Keep conta					<u>use, do no</u>	t store near heat or fil	<u>an</u> e
or strong		nts .				Аназм бинейнейней	1
OTHER PRECAUTIO	No:	ne :			· · · · · · · · · · · · · · · · · · ·	espure convenient administration	1
				····		Company of Command Street	1
PAGE (2)				•	5	HA ANTHOROUGH ONN SHEATHIOCHA	20
GPO 930-540	-	•	•			NA HOROGO RICH ONN SHEFORM OSHA-	Ĵ

(1) 3029

PROPANE WITH ODORANT

Issued 8/1/85

Flammable Gas

DOT I.D. No.1978 MATERIAL SAFETY DATA SHEET

UPG, INC., 2223 Dodge Street, Omaha, Nebraska 68102

SECTION	NI
	EMERGENCY TELEPHONE NO.
UPG/NGL a Division of UPG, Inc.	402/633-5100
ADDRESS (Number, Street, City, State, and ZIP Code) 2223 Dodge Street, Omaha, Nebraska 68102	
CHEMICAL NAME: AND SYNONYMS	TRADE NAME AND SYNONYMS
Liquefied Petroleum Gas, Propane	ID and IDO
Hydrocarbon Fo	ORMULA C3H8

SECTION	11 -	HAZAF	RDOUS INGREDIENTS		**
PAINTS, PRESERVATIVES, & SOLVENTS		TLV (Unita)	ALLOYS AND METALLIC COATINGS		TLV (Units)
PIGMENTS N/A		<u> </u>	BASE METAL N/A		
CATALYST N/A			ALLOYS N/A		
VEHICLE N/A			METALLIC COATINGS N/A		
SOLVENTS N/A			FILLER METAL PLUS COATING OR CORE FLUX N/A		
ADDITIVES N/A	$oxed{oxed}$		OTHERS		
OTHERS			·		-
HAZARDODA MITTURE	OF	OTHER LIC	DUIDS, SOLIDS, OR GASES	%	TLV (Units)
Propane (as specified by ASTM)	0-21	63-77)	with small amounts of ethane,		
propylene, iso butane and norm	al b	utane			
Ethyl-mercaptan (added as malodorant) approximately 1 lb. per 10,000					
gallons of liquid propane (ANS	[/NF	PA #58-	1982)		

S	ECTION III - P	HYSICAL DATA (Approximate or t	ypical
BOILING POINT (°F.) @ 14.7 psia	-44	SPECIFIC GRAVITY (H2O+1)	0.504
VAPOR PRESSURE psig, @ 100°F	maximum	PERCENT, VOLATILE BY VOLUME (%)	100%
VAPOR DENSITY (AIR-L) @ 600F	1.52	EVAPORATION RATE	None
SOLUBILITY IN WATER (slightly)	∠0.1%	ambient conditions.	
APPEARANCE AND ODOR Colorless	gas; a maloro	lorant added for detection	

SECTION IV - FIRE AND EX	(PLOSION HAZARD DATA							
FLASH POINT (Method used) FLAMMABLE LIMITS Lei								
EXTINGUISHING MEDIA Water spray; Class A-B-C or Class BC fire	extinguishers		9.60					
COCCUENT STORY CHOLINATED DEOCEDINES		iping coc	01.					
THE STATE AND EVELOSION HATAROS	•	ng metal	may					
fail from overheating. Approach container								
Water spray; Class A-B-C or Class BC fire special fire Fighting procedures Stop flow of gas; Use water to keep fire e Use water spray to disperse uniquited gas. UNUSUAL FIRE AND EXPLOSION HAZARDS If ignition has occurred, and no water is	xposed containers and p Evacuate area. available, tank or pipi	ng metal	ol.					

SECTION V - HEALTH HAZARD DATA
THRESHOLD LIMIT VALUE 1.000 ppm (840 mg/M3) per 8 hour day: IDIH 20,000 ppm. EFFECTS OF OVEREXPOSURE
Simple asphyxiant. High concentrations may lead to symptoms ranging from dizzi-
obible ashiyataire. Intgit concentrations hay read to symbolis ranging from areel-
ness to respiratory arrest. Vapor may cause moderate eye irritation.
EMERGENCY AND FIRST AID PROCEDURES Eye Contact - If liquid gets into eyes - contact a physician immediately. Skin
Contact - Liquid contact with skin should be treated as frostbite. Inhalation - If
overcome by vapor, remove victim to fresh air, apply artificial respiration if breathing has stopped.

•	• .		SECTI	ON VI - R	EACTIVITY DATA				
STABILITY	UNSTAB	UNSTABLE		CONDITIONS TO AVOID					
·	STABLE		Х	:					
Strong oxi	ty <i>(Materials</i> dizers	to avoid)							
HAZARDOUS DE Carbon mon	COMPOSITIO	N PRODU	тs plete	combustio	on				
HAZARDOUS	•	AY OCCUP	۱ ·		CONDITIONS TO AVOID				
POLYMERIZATI		LL NOT	CCUR	x					

SECTION VII - SPILL OR LEAK PROCEDURES						
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Shut off gas supply. Shut off sources of ignition. Ventilate the area. Disperse						
propane with water spray. Contact between skin and this gas in liquid form can						
cause freezing of tissue.						
WASTE DISPOSAL METHOD Controlled burning. Contact UPG, Inc.						
•						

SECTION VIII - SPECIAL PROTECTION INFORMATION							
RESPIRATORY PRO	TECTION (Specify type) Self C	ontained Breathing . d.	Apparatus or other fresh air				
VENTILATION	nfined space, if needed. Local Exhaust Exhaust approved for flammable cases		Explosion Proof				
:	MECHANICAL (General)		OTHER Keep sources of ignition away while ventilating.				
PROTECTIVE GLOVES EYE PROTECTION			V .				
Resistant to liquid propane Safety glas			es or face shield recommended				
USE a COMBUST	OTHER PROTECTIVE EQUIPMENT Use a combustible gas meter for detection						

SECTION IX - S	PECIAL PRECAUT	IONS		
recautions to be taken in Handling and Storin Keep container away from heat sources. Valve in the vapor space. Containers s	o Containers shou	ld be stored	with the relie	e£
valves from damage.	nonta vor be are	oppea. Protect	container and	1
other precautions Install protective caps on D.O.T. cylin	nders for being	transported.	"Flammable Gas	3"
label required on D.O.T. cylinders.		· · · · · · · · · · · · · · · · · · ·		
or More Information Contact:	Approved by:	Engineering	& Toch Service	≥s

For More Information Contact: UPG, Inc. 2223 Dodge Street Omaha, Nebraska 68102 402/633-6384

Safety & Industrial Hygiene

9/8

MATERIAL SAFETY

3 M

DATA SHEET

3M CENTER

ST. PAUL, MINNESOTA

55144-1000

612/733-1110 - Operator 55

N/A - Not Applicable

DIVISION: ADHESIVES, COATINGS AND SEALERS

TRADE NAME: SCOTCH-GRIP(R) Industrial Mastic 4289 NF

3M I.D. NUMBER: 62-4289-6331-8 62-4289-6332-6 62-4289-8530-3

62-4289-9530-2

ISSUED: OCTOBER 1, 1985 SUPERSEDES: JUNE 1, 1983

DOCUMENT: 1029644

					·
1. INGREDIENTS	C.A.S. NO		PERCENT	EXPOSURE LIMITS	
					===
synthetic rubber resin blend	H/A H/A	•		N∕D N∕D	5 5
anti-foaming agent	N/A			N/D	5
protein protective colloid	N/A			N/D	5
sodium orthophenylphenate	N/A			N/D	. 5
clay	N/A		٠.	N/D	5
TOTAL OF THE ABOVE	N/A		45.0	N/D	5
ethylene glycol	107-21-1		4.0	50 ppm (vapo	1
xylene	1330-20-7		2.0	100 ppm	1
potassium hydroxide	N/A		1.0	2 mg/m3	1 .
steam refined asphalt	8052-42-4	:	22.0	5 mg/m3 pet.	1
	/		· 1	fumes	1
SOURCE OF EXPOSURE LIMIT DATA:			ABBRE	VIATIONS:	
1. ACGIH Threshold Limit Values			N/D -	Not Determin	ed.

- 1. ACGIH Threshold Limit Values
- .2. Federal OSHA Permissible Exposure Limit
- 3. 3M Exposure Guidelines
- Chemical Manufacturer Recommended Guidelines 4.

None Established

BOILING POINT:

VAPOR PRESSURE:

VAPOR DENSITY (Air=1):

EVAPORATION RATE (Ether=1):

APPEARANCE AND ODOR:

SOLUBILITY IN WATER:

SP. GRAVITY (Water=1):

PERCENT VOLATILE:

VISCOSITY:

212F (water)

17 mm

> 1

Slower

Black, thixotropic

liquid

Dispersible

1.3

.3 1

200,000 CPS

MSDS: SCOTCH-GRIP(R) Industrial Mastic 4289 NF OCTOBER 1, 1985

PH !

1. 人名英马里希里**贝尔其其基**理是 termination for the ast · 好有情况的主义的中方 多田村 (4) 九人代

300,000

1. 水平 1. 化 1/2 (1 · 1/2)

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3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Closed Cup): NONE

FLAMMABLE LIMITS - LEL: N/A UEL: N/A

EXTINGUISHING MEDIA:

Water

SPECIAL FIRE FIGHTING PROCEDURES:

Fire fighters should be equipped with self-contained breathing aparatus when fighting fires involving this material.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

2331005 RIV 11.

Overheated, closed containers adjacent to fire could explode due to pressure buildup.

4. REACTIVITY DATA

STABILITY: STABLE

INCOMPATIBILITY - MATERIALS TO AVOID:

N/A

HAZARDOUS POLYMERIZATION: MAY NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS:

CO, CO2 and smoke particles when subjected to excessive heat or flame.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions in all sections. Collect spilled material and place in a container.

RECOMMENDED DISPOSAL:

Reclamation or incineration in a permitted hazardous waste facility capable of meeting applicable regulatory requirements for destruction and removal is preferred. Otherwise, dispose in accordance with applicable regulations. Cured product can generally be disposed in a sanitary landfill.

ENVIRONMENTAL DATA:

N/D

MSDS: SCOTCH-GRIP(R) Industrial Mastic 4289 NF RESERVED DCTOBER 1, 1985

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with plenty of water for 10 minutes and call a physician.

SKIN CONTACT:

Wash with soap and water.

INHALATION:

None required.

IF SWALLOWED:

None required.

7. PRECAUTIONARY INFORMATION

Use in well ventilated areas. Avoid eye and skin contact. Avoid breathing of vapors in confined areas with no ventilation. Keep out

of reach of children.

NOTE: Utilize personal protection equipment when handling this

product, i.e. impervious gloves and safety goggles or glasses.

- TEXTERTARESONS

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្នាន់**អ្នកស្ត្រីក្នុងស្ត្រី (១**, ១០ - ស្ត្រីក្រុងស្ត្រីស្ត្រី (ស្ត្រីក្រុងស្ត្រី) - ស្ត្រីក្រុងស្ត្រីស្ត្រី (ស្ត្រីស្ត្រី)

- PAROGRAFA ARGULEROU PAR SU BOLOMBALOU PULBARA PO BILANGEL

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CATEGORAL REPORTS AND LOS

11 47

MSDS: SCOTCH-GRIP(R) Industrial Mastic 4289 NF OCTOBER 1, 1985

8. HEALTH HAZARD DATA

EYE CONTACT: Irritating to eyes upon direct contact.

SKIN CONTACT: May be irritating to skin upon prolonged contact.

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.

MATERIAL SAFETY 3 M DATA SHEET 3M CENTER ST. PAUL, MINNESOTA ma 55144-1000

612/733-1110 - Operator 55 Duns No: 00-617-2082

DIVISION: ADHESIVES, COATINGS AND SEALERS

TRADE NAME: SCOTCH-GRIP(R) Industrial Adhesive 4799

3M I.D. NUMBER: 62-4799-2631-3 62-4799-5530-4 62-4799-6530-3

62-4799-8530-1 62-4799-9530-0

62-4799-7530-2 62-4799-9531-8

ISSUED: NOVEMBER 2, 1985

SUPERSEDES: OCTOBER 21, 1985

1027549 DOCUMENT:

###**#####################** INGREDIENTS C.A.S. NO. PERCENT synthetic rubber N/A N/D zinc rosinate N/A N/D hydrocarbon resin N/A N/D 5 phenolic resin N/A N/D talc N/A N/D TOTAL OF THE ABOVE N/A 39.0 N/D petroleum distillate 8030-30-6 41.0 200 ppm 110-54-3 n-hexane 14.0 50 ppm toluene go read average and 108-88-3 6.0 100 ppm SOURCE OF EXPOSURE LIMIT DATA: ABBREVIATIONS: 1. ACGIH Threshold Limit Values N/D - Not Determined Federal OSHA Permissible Exposure Limit N/A - Not Applicable 3M Exposure Guidelines Chemical Manufacturer Recommended Guidelines

2. PHYSICAL DATA CONTROL OF THE STREET OF TH

5. None Established

BOILING POINT: VAPOR PRESSURE: VAPOR DENSITY (Air=1): EVAPORATION RATE (Ether=1): APPEARANCE AND ODOR'S

SOLUBILITY IN WATER: SP. GRAVITY (Water=1): PERCENT VOLATILE: VISCOSITY: pH:

140F (Petro) J 68F 120 mm 3.0 2.5 Gray medium paste mild odor Very slight 0.82 Арргон. 65 7,500-18,000 CPS N/D

「自然またの」、後後数字数数を作る。これがなるのませずの。 《京·大学》、1951年197日 1962年11日 196

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一口的复数消耗法 一分工艺 哲范

建物设建铁头 人名英格 (设置设定

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星雷飞飞马指 法国家探查提出的

3. FIRE AND EXPLOSION HAZARD DATA

7.0

FLASH POINT (Closed Cup): -14F PETRO FLAMMABLE LIMITS - LEL: 1.0

EXTINGUISHING MEDIA:

CO2, foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES:

Fire fighters should be equipped with self-contained breathing apparatus when fighting fires involving this material. UNUSUAL FIRE AND EXPLOSION HAZARDS:

Extremely flammable. Overheated, closed containers adjacent to could explode due to pressure buildup.

4. REACTIVITY DATA

STABILITY: STABLE

INCOMPATIBILITY - MATERIALS TO AVOID:

HAZARDOUS POLYMERIZATION: MAY NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS:

CO, CO2 and smoke particles when subjected to excessive heat or $\frac{\partial L}{\partial t} = \frac{\partial L}{\partial t} + \frac{\partial L}{\partial t} = \frac{\partial L}$ flame. the business of a section

· 拉太野 中 - 14年17月11度 末 4 日 日 -5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions in all sections. Extinguish all ignition sources, collect spilled material, cleanup residue and store in closed metal container (U.S. Dept. of Transportation approved if waste will be shipped). Use absorbent material as needed in cleanup procedure.

RECOMMENDED DISPOSAL:

Commercial incineration with destruction and removal efficiency greater than 99.99% or reclamation is preferred. Otherwise, dispose in accordance with local and current U.S. Environmental Protection U.S. EPA Hazardous Waste Number: Agency regulations. D001 (Ignitable).

ENVIRONMENTAL DATA:

N/D

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with plenty of water for at least 10 minutes and call a physician.

SKIN CONTACT:

Wash affected area with soap and water. Prolonged contact may defat skin, resulting in dryness or cracking of the skin.

INHALATION:

Provide fresh air. If not breathing, give artificial respiration. Call a physician.

IF SWALLOWED:

Do not induce vomiting; immediately call a physician.

7. PRECAUTIONARY INFORMATION

od breaken in our

Keep away from heat, sparks and flame. Use only in areas adequately ventilated with enough air movmement to remove vapors and prevent vapor, buildup. The vapors released by this product can be easily ignited. Prevent contact with eyes and skin. Avoid prolonged breathing of vapors. Keep container closed when not in use. Keep out of reach of children.

NOTE: Utilize personal protection equipment when handling this product, i.e. impervious gloves and chemical goggles or safety glasses, whichever is most appropriate in the work situation. Provide local exhaust ventilation if necessary to keep vapor level below the permissable exposure limits.

SCOTCH-GRIP(R) Industrial Adhesive 4799 NOVEMBER 2, 1985

Page 4

-14551 GTTURESONS PARKER WAS A RESERVE

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1.5

HEALTH HAZARD DATA

B. HEALTH HAZARD DATA 人名西森姓氏 格 等有相口 家姓食

WAR AND S

Vapor hay cause EYE CONTACT: Liquid may cause severe irritation. irritation.

SKIN CONTACT: Prolonged and repeated contact may cause irritation and dermatitis. May be absorbed through skin. Symptoms include 一点以为特殊特别其正面证明。 有的 dryness and cracking. rifsmov monbar dog ka .

INHALATION: Inhalation of vapors at concentrations exceeding the established exposure limits may cause respiratory system irritation. Symptoms of overexposure include drowsiness, light headedness, dizziness, nausea and headache. Gross overexposure, such as would occur with deliberate inhalation of concentrated vapors inay cause nervous system damage as well as livel damage to n-hexane may cause nervous system damage. The chronic overexposure to n-hexane may cause nervous system damage. nervous system damage as well as liver damage with blood effects.

Swallowing may cause gastrointestinal irritation, nausea, INGESTION: diarrhea and nervous system impairment. Aspiration into the lung as TRANS OF VOYE a result of vomiting may cause lung damage. of the Roman F. and

Sheet or which involves using the product in combination with any other

product or any other process is the responsibility of the user.

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3.7 《4. 化对流滤光系统键》

The information on this Data Sheet represents our current data opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data

MATERIAL SAFETY DATA SHEET

ЗM 3M CENTER

ST. PAUL, MINNESOTA

55144-1000

612/733-1110 - Operator 55

Duns No:

DIVISION: ADHESIVES, COATINGS AND SEALERS

TRADE NAME: SCOTCH-SEAL(R) Metal Sealant 2084 3M I.D. NUMBER: 62-2084-2631-2 62-2084-8530-0

62-2084-9531-7

62-2084-9530-9

ISSUED: NOVEMBER 2, 1985

SUPERSEDES: COCTOBER 7, 1985

DOCUMENT: 1024355

والمراوي والمنطقة فالمعاف والمعاون والمعاورة		•	EXPOSURE	
	C.A.S. NO.	PERCENT	LIMITS	
		=======================================		=====
acrylonitrile/butadiene rubber	N/A		N/D	5
phenolic resin	ANA	•	N/D	5
gum rosin	H/A		N/D	5
salicylic acid	N/A		N/D	5
pigments	$\mathcal{H} \setminus \mathcal{H}$	•	N/D	5
clay filler	H/A		N/D	5
antioxidant	$H \times A$		N/D	5
TOTAL OF THE ABOVE	N/A	41.0- 43.0	מיא	5
acetone common to map	67-64-1	57.0- 59.0	750 ppm	1

SOURCE OF EXPOSURE LIMIT DATA:

- 1. ACGIH Threshold Limit Values
- 2. Federal OSHA Permissible Exposure Limit
- 3. 3M Exposure Guidelines
- 4. Chemical Manufacturer Recommended Guidelines
- 5. None Established

BOILING POINT : 5 % % VAPOR PRESSURE VAPOR DENSITY (Air=1) EVAPORATION RATE (Ether=1): APPEARANCE AND ODOR;

SOLUBILITY IN WATER: SP. GRAVITY (Water=1): PERCENT VOLATILE:

VISCOSITY:

pH:

132F (Acetone) J68F 180 mm

2.0

Aluminum, heavy syrup - ketone odor

ABBREVIATIONS:

N/D - Not Determined

N/A - Not Applicable

Slight

1.0

Approx. 58 31,646 cps.

M/D

3. FIRE AND EXPLOSION HAZARD DATA

ショウニーヤイみゃじる! FLASH POINT (Closed Cup): OF . FLAMMABLE'LIMITS 4 1 LEL: 2.6 UEL: 12.8

EXTINGUISHING MEDIA:

CO2, foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES:

Fire fighters should be equipped with self-contained breathing apparatus when fighting fires involving this material.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Extremely Flammable. Overheated, closed containers adjacent to fire could explode due to pressure buildup.

RMPONGRE

4. REACTIVITY DATA

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 $A_{i} = \lambda_{i}$ CASE.

STABILITY: TSTABLE

INCOMPATIBILITY: - MATERIALS TO AVOID: I N/A CONTRACTOR OF THE CONTRACTOR

HAZARDOUS POLYMERIZATION: MAY NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS:

The contract of the state of th

* Thermal decomposition or burning may produce nitrogen decomposition products including the possibility of hydrocyanic acid (HCN).

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5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE

#1 w/Observe/precautions in all sections. Extinguish all ignition sources. Collect spilled material. Cleanup residue and place in metal container (U.S. Dept. of Transportation approved if it is to be shipped). Use absorbent material as needed in cleanup procedure.

RECOMMENDED DISPOSAL:

Andreas with the wines

Commercial incineration with destruction and removal efficiency greater than 99.99% or reclamation is preferred. Otherwise, dispose in accordance with local and current U.S. Environmental Protection Agency regulations.

U.S. EPA Hazardous Waste Number: D001 (Ignitable).

ENVIRONMENTAL DATA:

N/D

6. SUGGESTED FIRST AID

EYE CONTACT:

In case of eye contact, immediately flush eyes with plenty of water for at least 10 minutes. Call a physician.

SKIN CONTACT

Wash with soap and water.

INHALATION:

If inhaled, remove to uncontaminated air. If not breathing, give artificial respiration. Call a physician.

IF SWALLOWED:

If swallowed, do not induce vomiting; immediately call a physician.

7. PRECAUTIONARY INFORMATION

Amade America Into April 18. Tomorro Amagan Amerikan perioda Amade Budin antika bamban 18. Sebesah Made antika madebakan b

Keep away from heat, sparks and flame. Use only in areas adequately ventilated with enough air movement to remove vapors and prevent vapor buildup. The vapors released by this product can be easily ignited. Avoid contact with eyes and skin. Avoid prolonged breathing of vapors. Keep container closed when not in use. Keep out of the reach of children.

NOTE: Utilize personal protection equipment when handling this product, i.e. impervious gloves and chemical goggles or safety glasses.

THE PROPERTY STATES OF THE REAL

B. KEALTH HAZARD DATA

EYE CONTACT: Liquid contact with the eye may cause severe eye irritation. Vapor contact is also irritating.

SKIN CONTACT: May cause irritation on prolonged or repeated contact.

INHALATION: Overexposure to vapors may cause respiratory system Thank MYRE irritation and temporary nervous system impairment. Symptoms of the mouth, Wolfeachthi overexposure include dizziness, giddiness, dryness of the mouth, weakness, nausea and headache.

INGESTION: May cause digestive system irritation. Aspiration into the lungs through vomiting following ingestion may cause lung damage. Symptoms following ingestion include irritation, nausea, difficult breathing and nervous system impairment.

'he information on this Data Sheet represents our current data and best pinion as to the proper use in handling of this product under normal

Any use of the product which is not in conformance with this Data

heet or which involves using the product in combination with any other roduct or any other process is the responsibility of the user.

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U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration

Form Approved OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

The second secon	SECTION I	
MANUFACTURER'S NAME Pacer Technology & Resources		EMERGENCY TELEPHONE NO. (408) 379-9701
ADDRESS (Number, Street, City, State, and ZIP Code) -1600 Del'1 Avenue, Campbell,	California 950	008
CHEMICAL NAME AND SYNONYMS Ethyl C-Cyanoacrylate CHEMICAL FAMILY		ADE NAME AND SYNONYMS ACER TECH ATS-RX100
Cvanoacrvlate	FORMULA CH2=CCN	I-COOC ₂ H ₅ , Proprietary

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	; %	TLV (Units)
PIGMENTS	0		BASE METAL	0) i
CATALYST	0		ALLOYS	0	,
VEHICLE	0		METALLIC COATINGS	0	
SOLVENTS	0		FILLER METAL PLUS COATING OR CORE FLUX	0	
ADDITIVES disputs to	0		OTHERS	0	
OTHERS	0				
					TLV (Units)

MOREAVING SECTION III - PHYSICAL DATA						
BOILING POINT (°F.) @6mmHg.	149	SPECIFIC GRAVITY (H2O=1)	1.07			
VAPOR PRESSURE (mm.Hg.) @20°C	~1	PERCENT, VOLATILE BY VOLUME (%)				
VAPOR DENSITY (AIR-1) HTT @20°C		EVAPORATION RATE (
SOLUBILITY IN WATER	Insolut	le				
APPEARANCE AND ODOR A transpar	rent liqui	d with a special stimul	ative smell.			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) TCC 176°F FLAMMABLE LIMITS Lel Uel

EXTINGUISHING MEDIA Flush with large quantities of water or a dry chemical extinguisher special fire fighting procedures Flush with large quantities of water or a dry chemical extinguisher.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Same as above.

•	SECTION V	- HEAL	TH HAZA	KD DATA	. [
THRESHOLD LIMIT	value 2 ppm			1.1		
EFFECTS OF OVERE The adhes	xposure ive bonds skin rap	idly a	ind stro	ongly, irri	tates eyes	and
mucous me						
	rest Ald Procedures sh thoroughly and	auickl	v with	water, obt	ain medical	
	ention and wash sk		· 			
	•			i was Tanti	Copilli responsibili	
	<pre>n: Move to fresh : Induce vomiting</pre>		btain m			
Tuses rion						
STABILITY		ONIDATIONI	TO AMOID	/ DATA	The site is a second of the second of the	
STABILITY .	BASIABLE ABOVE 1760F	Heat,	moistu	re & alkal	<u>ine substan</u>	ces.
	STABLE Up to 1220F	Pleas	e store	in cool a	reas	
	ed by water, alcoh-	ols, a	mines a	nd alkalin	e-substance	•
HAZARDOUS DECO	MPOSITION PRODUCTS			A STATE OF THE STA	gal galant gan a way tan gan a sang	
HAZARDOUS	MAY OCCUR	T	CONDITION	S TO AVOID	A Commence of the Commence of	
POLYMERIZATION	WILL NOT OCCUR	XX	Do sto	me in a co	ol area and	
		1 VV 1			4.9 K 4.5 V	1
	**************************************		NOT ma	naterials.	e contact w	ıtn'
	SECTION VII -	SPILLO			<u> </u>	í. , ,
	N IN CASE MATERIAL IS RELEA		· · · · · · · · · · · · · · · · · · ·	HOOLDONLO	البعد المحالمات والجسوا محيد	<u> </u>
					784 to 1	t .
Absorb wi	th tissue paper or	cloth	. Dispo	se of soli	d waste in	water.
WASTE DISPOSAL N	IETHOD		 	······································		1
·····	Dump a	s chem	nical wa	iste.		1
					•	}
	SECTION VIII - SPE	CIAL PR	ROTECTIO	N INFORMAT	ON	
RESPIRATORY PRO	TECTION (Specify type)	ot nec	essary		Same di Stanton de la constitución	
VENTILATION	LOCAL EXHAUST Not nec			SPECIAL	ot necessar	
	MECHANICAL (General) Sealed Water			OTHER A.G.	er her artistisker in e)
PROTECTIVE GLOV	ES .	SCIAL	EYE PROTE	CTION 931	ot necessar	-1
Rubber or			Sate		with shiel	
OTHER PROTECTIV	E EQUIPMENT				ASSESSMENT OF MARKET AND	
	CEOTION IN			A STATE OF THE STA	en e	<u> </u>
DDECALITIONS TO	SECTION IX			AOTIONS	Salar Charles for Fore	
Avoid moi	sture, do not stor	e abov	<u>е 24⁰С.</u>		tainer tigh	tly
closed.			· .	as a second to constitute	IT for the seconds.	
other precautic Avoid con	ons tact with skin and	eves.	breatl	ning vapor	and avoid	1
	to overlight			- •	Contract of the Contract of th	.; \

PAGE (2)

Material Safety Data Sheet

METALLOID CORPORATION 219-356-3200 500 JACKSON STREET HUNTINGTON, IN 46750 Robert F. Kowalski Date July 3, 1986 Signature SECTION: 1 IDENTITY Trade Name (Used On Label) TAPEZE X-2 Chemical Family Straight Oil Metalworking Fluid SECTION 2 HAZARDOUS INGREDIENTS Chemical Name CAS# TLY (Units) Hydrotreated, light paraffinic distillate, petroleum 10 64742-55-8 * Hydrotreated light naphthenic distillate, petroleum 64742-53-6 48 * Hydrotreated heavy naphthenic distillate, petroleum 64742-52-5 * $5mg/m^3$ for oil mist in air SECTION 3 PHYSICAL AND CHEMICAL DATA (FIRE AND EXPLOSION DATA Boiling 360°F Specific Vapor Gravity (H₂O=1) 0.98 @ 70°F Pressure (mm Hg) <0.01 Vapor Density Percent Volatile pΗ By Volume (%) Negligible (Air = 1) > 5.0 NA Solubility In Water **Evaporation Rate** n-Butyl Acetate=1 <0.01 Negligible Appearance and Odor Dark viscous liquid with sulfurized oil odor Flammable Limits Lower Upper Flash **Point** in Air % by Volume 375°F (COC) NA Extinguisher Carbon Dioxide and Dry Chemical Media Special Fire. Fighting Procedures Use water spray to cool containers exposed to flames. Firefighting personnel should wear respiratory protection. Unusual Fire and Explosion Hazard roducts of combustion include fumes, smoke, and carbon dioxide. SECTION 4 PHYSICAL HAZARDS (REACTIVITY DATA) Conditions Unstable Stability Not Applicable Stable to Avoid Incompatibility (Materials to Avoid) Strong oxidizing and Reducing agents Hazardous **Decomposition Products** Carbon oxides, Sulfur oxides, and Hydrogen chlorides May Occur Conditions Will Not Occur to Avoid Not Applicable

Hazardous Polymerization

. PRODUCT WANG	and the state of t
SECTION 5 HEALTH HAZARD INFORMATION	the state of the s
Threshold Limit Value Not Established 5mg/m ³ for mist ·	ું કાર્યા કેલ્પિક સ્થાનુસ્થા મહેરા કું કર્યા છે.
Signs and Symptoms 1. Acute of Overexposure Coverexposure If splashed into ey	es, irritation may occur. Prolonged
or repeated skin contact with this product tends to rem	ove skin oils possibly leading to
irritation and/or dermititis.	
2. Chronic Overexposure None known. This product has a long his	
use without any known adverse health effect to manufact	ure and industrial workers.
	The Control of the Co
Emergency and First Aid Procedures	
1. Eyes Flush with large amounts of water for a mi	nimum of 15 minutes. Call a physici
	The state of the s
2. Skin If irritation develops, wash with soap and	water. If irritation persists, cal
a physician.	
3. Ingestion DO NOT INDUCE VOMITING - Call a physician	immediately.
4. Inhalation Remove to fresh air if dizziness develops.	in the Company of the Mark of the Company of the Co
	South March 1995 St. Salatin St. St. Salatin St. St. Salatin St. S
SECTION 6 SPECIAL PROTECTION INFORMATI	ON
Respiratory Protection Not normally required if ventilation	ورور وروان والمناز وال
Ventilation If mists are present, provide adequate ventila	tion to control level below PEL.
Protective Gloves Oil resistent recommended. Eye Protection	on Safety glasses or splash goggles
Other Protective Clothing or Equipment If there is likelyhood of splashing,	an oil resistent apron should be
worn to prevent clothing contamination.	The AMMERICAN CONTRACTOR
SECTION 7 SPILL OR LEAK PROCEDURES	
Steps to be Taken in Case Material Spilled or Released Shut off ignition sources. Conta	in spill. Large quantities can be
pumped. Small quantities may be soaked up on oil absor	bent.
Waste Disposal Dispose of according to Local, State, and Methods	
	y y sa distribita a braktura as h
SECTION 8 SPECIAL PRECAUTIONS	
Precautions to be Taken in Handling and Storage Keep away from flames, sparks, or	other heat sources. Never use a
torch to cut or weld on or near container. Empty conta	ainers may contain explosive vapor.
Do not transfer to unlabeled containers. Keep container	
Other Precautions For industrial use only.	The state of the
1 i voqui (vila	

Modified by Shell Oil Company.

SHELL OIL COMPANY SHELL CHEMICAL COMPANY SHELL DEVELOPMENT COMPANY SHELL PIPE LINE CORPORATION

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MATERIAL SAFETY DATA SHEET

information on this form it furnished solely for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not b

							-
		SECTIO	ו אכ				
MANUFACTURER:S NAME Shell Chemical Company			•	713-4	73-9461		; ,
One Shell Plaza, P. O. Box 2403	Ho	uston, T	x 77001				
xylene, dimethyl benzene; methy	l to	luene, xy	ylol	TRADE HAME (She	ll Xylene)
aromatic hydrocarbon				4(CH ₃) ₂			
SECTION		HAZARDO	OUS INGREDI	ENTC!		<u> </u>	_
	T	MAZARDO		P50	L-1	C50	- -
COMPOSITION	7.	SPECIES	ORAL	DERMAL	CONCENTRATIO		HOURS
hell Xylene*	100	Rat	>5.0 m1/kg		5,000 pp	m	4
				,	(approx.		Ť
		Rabbit		>2.0 ml/kg			
	Π	·					1.
	ļ	 	 				
		<u> </u>	 		·		
,	-	ļ					
							
A mixture of ortho-, meta-, and	1 22		nes plus et	hylbenzene			
A mixture of ortho-, meta-, an	1 12	A A Y I C.	ics plus et	y I beli welle			-+
	<u> </u>	<u></u>	<u> </u>	<u> </u>			
SEC	TION	III PHY	SICAL DATA				
COILING POINT (F)		281-284	SPECIFIC GRA			0.8	71
VAPOR PRESSURE (mmHg) 68°F (20°C)		6	PERCENT VOL			0.0	/1
VAPOR DENSITY (AIR=1)		3.7	EVAPORATION			0.6	
SOLUBILITY IN WATER	-		<u>'</u>	_ = 1 nbuac=1	· · · · · · · · · · · · · · · · · · ·	0.8	<u> </u>
APPEARANCE AND ODOR		gligible		 	······································	<u> </u>	
Colorless liqu	ila v	Jith aron	natic odor.	<u></u>		•	
SECTION IV F	IRE	AND EXP	LOSION HAZ	ARD DATA			
FLASH POINT (Method used)			FLAMMABL		Lol	Ù	101_
ng Closed Cup 81°F					1.0	7	٠0٠
extinguishing Media Handle as a FLAMMA) Use foam, (102, stee	BLE I	LIQUID. vater-fog	. dry chem:	icals		•	
special fire fighting procedures o not use water, exclude air. Us	•				. Wear se	lfco	nta
ceathing apparatus. Consult loca		•		* ***		•	•.•

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE ACGIH TWA 100 ppm (skin)

trricts of overexposure. Anesthesia - headache, nausea, dizziness, etc. Liquid moderately irritating to skin

and eyes. Irritant to upper respiratory system.

Remove victim and restore breathing if required. Remove from skin with soap and

water. Flush eyes with water for 15 minutes. Get medical attention if irritation

persists.

	•		SECT	ION VI F	EACTIVITY	Y DATA	
STABILITY UNSTABLE		ABLE		CONDITION	S TO AVOID		· · · · · · · · · · · · · · · · · · ·
	STABL		X		:	,	
Not applicab	loteriol. Le	s to avoid) .					
CO, CO2 when	DAT ON	PRODUCTS					
HAZARDOUS M		MAY OCCUR	 :-		CONDITIONS	TO AVOID	
		WILL HOT OCCI	10	х			

SECTION VII SPILL OR LEAK PROCEDURES

contained respirator. Large spills-dike and remove liquid by vacuum truck or by pumpin into salvage vessels. Small spills-soak up with adsorbent such as rags or clay and. place in sealed container. Can create explosion hazard in sewers - Notify authorities.

CONTEM JAROGEIG STRAW Reclaim solvent. Burn in approved incinerator. Bury in approved dump.

	SECTION VIII SPE	CIAL PROT	ECTION INFORMATION	
RESPIRATORY FROTECT	ion (Specify type) 1 respiratory equipmen	t		
VENTILATION	LOCAL EXHAUST Desirabl		SPECIAL	
	MECHANICAL (General) With approved Class D	explosion	other -proof motors and switches	
Rubber gloves	if' direct skin contac		EYE PROTECTION Conventional eye cover to guard a	gainst
OTHER PROTECTIVE EQU	JIPMENT	expected	unexpected splashing.	

SECTION IX SPECIAL PRECAUTIONS

Avoid open flames and spark sources. Avoid splash-filling. Provide adequate ventilation. Avoid excessive heat. Handle as a flammable liquid OTHER PRECAUTIONS Do not breathe vapor.

Product Safety & Compliance - O&C Products

Shell Oil Company May, 1978

USE THEREOF. VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT ADMERED TO AS STIPULATED IN THE DATA SHEET, ADDITIONALLY, VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ABNORMAL USE OF THE MA

PHIGRAPH CHILDRE TO GEREARING BY THARRAW OF LATE MORE CHILDRES OF BLUCHER AND ACAD BRAIN

THE 'NFORMAT'ON CONTAINED HEREIN S BASED ON DATA CONSIDERED AC-



Sun Refining and Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PERIODICALLY TO ASSIST OUR CUSTOME COMPLIANCE WITH HEALTH/SAFETY/ENVI REGULATIONS PLEASE FORWARD THIS TOF SAFETY AND HEALTH THIS FORM REPREVIOUS FORM DATED 08/03/85

RINTED= 85/10/12	المارية المارية	e qui the state of the		2	PRE	VIOUS !	FORM DAT	TH- THIS ED 08/03/	85
tage a manage of a	<u>Nerralagada</u>	SYNONYMS	,						1044 10 4 1 100
"E XYLENE								 	
REGISTRY NO 330207	CAS	NAME XYE	ENE						
SUPERIOR OIL ATTENTION-MR. P. O. BOX. 41822 INDIANAPOLIS	BYRON	BETTES	62 41 :			TEN	CIALITA	END_ARONA MARKETING TER: 1801	TIC HYDR S CUMPAN
L			·			· L	·	JONATH	1200-07
ECTION 2 INGREDIENTS	A S	ga ta jagasa			18 P. P. S.	err jägi arvinen	e alice da la constru	a Spekie, a Ala	
ING POINT: 780 mm Hg 278 TO	<u> 290</u> •	F. 137 1	0 143	°c		RE: (mm /: (/	Hg AT 20°C)	AT 25C	pH INFO
	1	r. HAIROS				-	VOL)		
IFIC GRAVITY: (H ₂ O=1) 04 ING DENSITY: Kg/m ³ N/		•			% VOLATILES 8 EVAPORATION F (ETHYL ETHER	RATE:	10 X S	SLOVER	APPEAR AND OF
CTION 4 FIRE AND EXPLOSION	N DATA	(CONT. ON PA	GE 2) 65 %	্রিক্সক্রেও জন্ম		- O - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2			
H POINT: 79 TAG E.C.	•F.	26 TAG	c.c.		C. AUTOIGNITIO	ON TEMPER	ATURE: 870	3 3 43 4 3 4	• _F 4
NFPA CLASSIF	CATION V	任不会		المدوور ويوا	HAZARD: RATII	NG ASSET	·	- Sanda	FLAMMABLE:
TH 2 ARE 3	REACTIV	\$8 per - 1971 & 1				1		OSIVE LEVEL (LEL	
- शिक्षोपिक्ष का भारती के ले हैं कि किसाब करते का बन	1 2 Jun 1 Jun 190	Pagina i			\$ \$ (v 3		Siren Direct	7 7 7 3 X X X	13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
FIRE AND EXPLOSION HAZARD	Sosse								<u> </u>
HMABER LIGUID FRAS	H POI	NT <100	F			का केंगी आब 1. 1. 1. • दें 1 जा 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		i Pad Ro Kolomora	Addition (1) The Company
		Light Linesy See				er in secur			. A erry every
								1	1



Sun Refining and Marketing Company

Marketing Company

THIS PRODUCT SAFETY INFORMATION I
PERIODICALLY TO ASSIST OUR CUSTOM
COMPLIANCE WITH HEALTH/SAFETY/ENV
REGULATIONS. PLEASE FORWARD THIS
OF SAFETY AND HEALTH. THIS FORM RI
PREVIOUS FORM DATED 08/03/85

XINTED: 85/10/12 SECTION 1 IDENTIFICATION TO SECTION 1	PREVIOUS FORM DATED 08/03/85
ME TYLENE SYNONYMS XYLDI	
REGISTRY NO 330207 CAS NAME XYLENE	
SUPERIOR GIL COMPANY ATTENTION-MR. BYRON BETTES P. 0 BOX 418226 INDIANAPOLIS IN 46241	CHEMICAL FAMILY BLEND AROMATIC HYDE SUN REFINING AND MARKETING COMPAN TEN PENN CENTER 1801 MARKET'S PHILADELPHIA PA 19103
	INFORMATION SUPPLIED BY JUNATHAN M. HAAND PHONE \$2151 293-6321
SECTION 2 INGREDIENTS	
	VAPOR PRESSURE: (mm Hg AT 20°C) 9 AT 25C pH INF
LING POINT: 780 mm Hg 278 TO 290 of, 137 TO 143	3 °C VAPOR DENSITY: (AIR = 1) 3.7
TING POINT: MINUS 53 FF, NINUS 47-4	4 °C SOLUBILITY IN H ₃ O: (% BY VOL) NIL PART
CIFIC GRAVITY: (H,O=1) 0-87	% VOLATILES BY VOL: 100 APPEA
KING DENSITY: HEN APPLICABLE: Kg/m² #/A	EVAPORATION RATE: (ETHYL ETHER = 1) 10 X SLOWER ODOR
ECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)	
SH POINT: - 79 TAG C.CF 26 TAG C.C.	°C. AUTOIGNITION TEMPERATURE: 876
NFPA CLASSIFICATION WELVE	HAZARD RATING
TH 2 FIRE 3 REACTIVITY 0	LEAST SLIGHT 0 1 LOWER EXPLOSIVE LEVEL (LEL)
IFIC HAZARD	MODERATE HIGH EXTREME UPPER EXPLOSIVE LEVEL (UEL)
FIRE AND EXPLOSION HAZARDS	
MHABLE LIQUID FFLASH POINT CLOOF	

POLYMERIZATION

TEAMERIZATION WILL NOT OCCUR-

SECTION 7 PROTECTION INFORMATION

VENTILATION TE UNEY WITH ADEQUATE VENTILATIONS VENTILATE AS NEEDED TO COMPEY WITH EXPOSURE CIT INTIRATION RECOMMENDED.

PERSONAL PROTECTIVE EQUIPMENT SPLASH OF PRODUCT.

DVES IPPERAIGNS CLUVES RECOMMENDED MEN PROLUNGED SKIN CONTACT CANNOT BE AVOIDED.

PRINTOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED

TER IF CONTACT IS UNAVOIDABLE. WEAR IMPERVIOUS PROTECTIVE GEAR.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY
LENE IS TOXIC TO FISH AND FISH FOOD ORGANISMS. FOR Q-AND M-XYLENE. 96-HOUR TLA VA
MG/LITER WERE FOUND FOR FATHEAD HINNOWS. BLUEGILUS. GOLDFISH. AND GUPPIES. RESPE

SPILL LEAK OR RELEASE
EVENT IGNITION: S EVENT IGNITION: STOP LEAK: VENTILATE AREA. CONTAIN SPILL. USE WATER SFRAY TO DISP A: STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

ILUW FEDERAL. STATE AND LUCAE REGULATIONS. RCRA HAZARDOUS WASTE. DO NOT FLUSH TO CINERATE. DRAIN TO CHEMICAE WASTE PLANT. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

ECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

EP AVAY FROM HEAT. SPARKS AND FLAME. KEEP CONTAINER TIGHTLY CLOSED. KEEP IN WELL ASS IC STORAGE. CONSULT NEPA AND OSHA CODES. TRANSFER OPERATIONS MUST BE ELECTRIC SSIPATE STATIC BUILDUP. WASH THOROUGHLY AFTER HANDLING.

ECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

RNING: FLAMMABLE. DANGER! HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. KEEP AWAY AME. KEEP CONTAINERS CLOSED. USE ONLY WITH ADEQUATE VENTILATION. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. IF SWALLOWED. DO NOT INDUCE VOMITING SISTANCE-IMMEDIATELY. KEEP OUT OF REACH OF CHILDREN. D.O.T. FLAMMABLE: LIQUID LABE PTY" PICTOGRAM AND MESSAGE ALSO REQUIRED FOR CONTAINERS



MATERIAL SAFETY DATA SHEET INDEX

MAINTENANCE FINISHES November 18, 1985

DU PONT MAINTENANCE FINISHES

MSDS	NO.	MSDS. NO.	
MF 1.0	AEROSOLS	MF 40.0	ALL THINNERS
	• 900P-930P:	MF 50.0	DRY BULK ITEMS
MF 10.	0 URETHANE ENAMELS AND PRIMERS	•	• 347-Y-B910, 347-Y-B912, 347-Y-B931, 347-Y
	 Products starting with these prefixes: 62, 		B937, 347-Y-B971, 347-Y-B973, VM-5596.
	326, 333, 338, 364, 369, 826, 827, 1P-16P.	MF 60.0	PAINT ADDITIVES
MF 20.	0 URETHANE ACTIVATORS AND CLEARS		 VD-1287, VD-E-56433, VH-Y-260, VH-Y-691
•	 RK-808, RK-5406, VG-1450, VG-6005, VG- 		VM-8195, CM colorants.
	Y-250, VG-Y-511, VG-Y-518, VG-Y-710, VG- Y-719, 192 S, 792S.	MF 70.0	LATEX BASED PAINTS
MF 30.			 Products starting with these prefixes: 310, 311, 315, 347-Y-A971, 389, 392, 394, 830, and codes ending with the suffix C.
	 Products starting with these prefixes: 28, 29, 63, 65, 66, 67, 75, 80, 81, 88, 89, 93, 96, 112, 113, 166, 181, 183, 210, 347, 354, 360, 373, 481, 523, 529, 612, 621, 631, 639, 657, 681, 802, 818, 823, 825, 840, 881, 909, 917, 918, 929, 934, 939, 943, 951, 964, 994, 995, 1065, 1081, 1657, 1681, VF, VG (NON-ISOCYANATE), VQ, 704C. 		
	·		•



MATERIAL SAFETY DATA SHEET AEROSOL FINISHES

MAINTENANCE FINISHES November 18, 1985

Section 12 4 4 11 1

Manufacturer

E. I. du Pont de Nemours & Company, Inc. Finishes & Fabricated Products Department Wilmington, DE 19898

Telephone: Product information (800) 441-7515 Medical emergency (800) 441-3637 Transportation emergency (800) 424-9300 (CHEMTREC)

greenmesse:

Product: Acrylic Enamels and Alkyd Primers packaged in aerosol containers.

D.O.T. Hazard Class: Flammable Gas

Section II — Hazardous Ingredient Listing

This section lists all products sold in this classification and the hazardous ingredients in each. For specific information regarding the hazard(s) associated with each ingredient, refer to Section X. If you have a Du Pont Maintenance Finishes Aerosol not specifically, designated below, check the label for the list of ingredients and then refer to Section X.

	•
Product a la (Flash Point of Code and la (Closed Cup)	8-08-2000 Hazardous Ingredients
900P	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
901Rm 44 \$20mm	51; 2; 3; 4, 5, 7, 9, 16, 20, 21, 28
0902P. may they 2006.6-1</th <th>~2,3,4,0,40,20,21</th>	~2,3,4,0,40,20,21
	11, 2, 3, 4, 5, 7, 8, 9, 13, 16, 17, 18,
en dryl a spaniarin	
905P < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
	1, 2, 3, 4, 5, 9, 14, 16, 18, 20, 21, 25
907P < 20	1, 2, 3, 4, 5, 13, 14, 16, 18, 20, 21, 25
908P < 20	1, 2, 3, 4, 5, 16, 18, 20, 21, 25
909P < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
910P	: 1, 2, 3, 4, 5, 7, 9, 11, 16, 18; 20 ,
Commission and Commission of the Commission of t	21, 25
	1, 2, 3, 4, 5, 9, 16, 18, 20, 21
(<u>,912P</u> ,,, -: (< 201	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
	1, 3, 4, 5, 11, 16, 20, 21
915Pd of 144 91< 20 900	/2, 3, 16, 20, 21, 26
916P(*********< 20****	· 1, 3, 4, 5, 16, 20
917P	2, 16, 20, 21, 27
918P < 20	'1''2''3' 4' 5, 9, 16, 18, 20, 21
919P < 20 14 17	1, 2, 3, 4, 5, 7, 9, 16, 17, 20, 21
920P < 20	1, 3, 4, 5, 16, 20, 21
921P 110 1 < 20 11	1, 2, 3, 4, 5, 9, 16, 18, 20, 21
922P ball 4 < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
923P (3 ⊕ ⊕ 1 < 20)	1, 2, 3, 4, 5, 9, 16, 18, 20, 21
924P 6/4 5 < 20	2, 5, 9, 15, 16, 20, 22
925P < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
1926P < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
927P (Str. 13) < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
928P < 20	1, 2, 3, 4, 5, 7, 9, 16, 18, 20, 21
929Parantz 1 < 20. rama	1, 2, 3, 4, 5, 9, 16, 18, 20, 21
930P. < 20	1, 2, 3, 4, 5, 9, 14, 16, 18, 20, 21

Section III --- Physical Data

Evaporation rate: Faster than ether

Solubility in water: Moderate appreciable, depending on color Approximate boiling range:

Below 0°F (propellant)

Gallon weight: 6.2 lbs. typical

Vapor density: Heavier

Percent volatile by volume: 92% typical Percent volatile by

weight: 85% typical

Section IV — Fire & Explosion Data

Flash point (Method): Below 20°F (closed cup) Extinguishing media: Foam, carbon dioxide, dry chemical Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water may be ineffective. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire and explosion hazards: Contents under pressure. Keep at room temperature as exposure to sunlight or other heat may cause cans to burst, propelling contents across

Section V — Health Hazard Data

Indestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have names of ingredients available. .

Inhalation: Overexposure may cause nose and throat irritation. May cause central nervous system effects such as dizziness, headache, nausea, staggering gait, confusion and unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

If affected by inhalation of vapor or spray mist, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause eye irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: Stable

Conditions to avoid: Do not store above 120°F. Incompatibility (materials to avoid): none reasonably foreseeable.

Hazardous decomposition products: CO, CO2, smoke, oxides of heavy metals reported in Section X. Hazardous polymerization: Will not occur.

Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbent.

Section VII - Spill or Leak Procedures - Continued

Waste disposal method: Do not allow material to contaminate ground water systems. Inclnerate absorbed material in accordance with federal, state and local requirements. Do not inclnerate in closed containers.

Section VIII — Special Precaution Information

PERSON DOMESTICAL

Respiratory: Do not breathe vapors or mists.

Wear an appropriate, properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC23C) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Coveralls and neoprene gloves are recommended. Do not reuse coveralls while solvent odor is retained in them.

Eye protection: Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guards or side shields.

Protective creams: May be used for ease of clean-up, not for protection.

asp@binsenail

Section IX - Special Precaution Information

Precautions to be taken in handling and storing. Observe label precautions, Keep away from heat, sparks and flame. Do not store above 120°F. Do not expose to direct sunlight to avoid bursting. Wash thoroughly after handling and before eating and smoking.

Other precautions: Do not sand, flame cut, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation. White the property of the process o

Do not spray near fire or open flame.

Section X — Additional Information

Following Isra summary/of/the/Ingredients listed in Section II and their known hazards as I to a make a section II have the state of the section of the sect

Ingredient No.	intero lova de	q a foctord na nitw deep polonoiq s CAS No.	Pressure (mm Hg	Exposure Limits
1.	Methyl ethyl ketone		.;; y95 - ·.;;	

High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone has been demonstrated to potentiate (i.e., shorten the time of onset) the peripheral neuropathy caused by either N-Hexane or Methyl N-butyl ketone. MEK by itself has not been demonstrated to cause peripheral neuropathy can say the second constraints.

2. Toluene 108-88-3 29 100 ppm-A

Tests in animals have shown liver, bone marrow and kidney effects.

3. Acetone 344 67-64-144 1864 750 ppm-A 1000 ppm-A

4.	Butanol	71-36-3	4	50-A ceiling 100-0 25-D 50-D 15 min.
May caus	e moderate e	ye burning.		:
5.	Xylene	1330-20-7	25	100 ppm-A 100 ppm-0

High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts.

6.	Aromatic hydrocarbon	64742-95-6	10	50 ppm-D
7.	Aromatic hydrocarbon	64742-94-5	10 .	100 ppm-D
8.	Medium mineral spirits	64742-88-7	45 .	100 ppm-D

X

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage.

9. VM & P 64742-89-8 45 300 ppm-A naphtha 100 ppm-D

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage.

11.	Iron oxide	1309-37-1	None	None
13.	Lead chromate molybdate	12656-85-8	None	150 ug/m³-A as lead (Pb) 50 ug/m³-0 as lead (Pb) 50 ug/m³-A as chromium (Cr) 50 mg/m³-0 as chromium (Cr)

Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA Lead Standard 29CFR1910.1025. Is an IARC, NTP or OSHA Carcinogen.

14.	Lead chromate	18454-12-1	None	150 ug/m³-A as lead (Pb)
	•	•	•	50 ug/m³-0
				as lead (Pb)
				50 ug/m³-Á
				as chromium (Cr)
				0.1 mg/m ³ -0
				as chromium (Cr)

Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary, reproductive systems including

Section X - Additional Information - Continued

embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA Lead Standard 29CFR1910.1025. Is an IARC, NTP or OSHA Carcinogen.

Ingredient No.	Name	CAS No.	Pressure (mm Hg @ 20°C)	Exposure Limits
15.	Methylene chloride	00075-09-2	400	100 ppm-A 500 ppm-0

Contact may cause skin burns. Can be absorbed through the skin in harmful amounts. May cause an Increase in carboxyhemoglobin levels which may result in a reduced level of oxygen in the blood. Heavy smokers and those with heart disease may experience increased risk of heart problems. Is an IARC, NTP or OSHA Carcinogen. Open flames or welding arcs can produce toxic decomposition products such as hydrogen chloride or phosgene.

16.	Non- hazardous polymer	None	None	None
17.	Non- hazardous organic pigment	None	None	None
18.	Titanlum dioxide	13463-67-7	•	10 mg/m³-/

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis

of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the masive 250 mg/m³.

19.	Propane	74-98-6	760	1000 ppm-A
20.	Isobutane	75-28-5	760	None
21.	Zinc	7440-66-6	None	None
22.	Silicone	None	None	None
23.	Graphite	7782-42-5	None :	i0 mg/m³-A
24.	Butyl acetate	123-86-4	8	150 ppm-A 150 ppm-0
25.	Ethyl Ethoxy- propionate	00763-69-9	2	50 ppm-S
26.	Aluminum paste	7429-90-5	None	10 mg/m³-A as aluminum
27.	Propylene gylcol monomethyl ether acetate	108-65-6	3.8	100-A skin

May cause eye irritation with discomfort, tearing, or blurred vision. May cause moderate eye burning. Can be absorbed through the skin in harmful amounts.

Notice: The data in this Material Safety Data Sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

Product Manager Maintenance Finishes





MAINTENANCE FINISHES November 18, 1985

IMRON® POLYURETHANE ENAMELS AND PRIMERS

(USE FOR PRODUCTS STARTING WITH THE FOLLOWING PREFIXES: 62, 326, 333, 338, 364, 369, 826, 827, 1P-16P)

			1114.4		ត្តទីនិងមាននៃ <u>-</u>	444.5
Section I		326-Y-67717	< 73	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22, 27
	,	326-Y-67804	< 73	'3,'4,'5,'8 <u>`</u> 9,	10, 13, 17, 1	8, 22, 23, 27
Manufacturer	. lan	326-Y-67846	< 73	`3. 4. 5. 8: 9.	10: 17: 18: 2	0. 22. 27
E. I. du Pont de Nemours & Compan		326-Y-67871	<73.º ·	3, 4, 5, 8, 9,	10: 13: 17: 1	8, 20, 22, 27
Finishes & Fabricated Products Depa	triment	326-Y-67954	<73	[3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22,
Wilmington, DE 19898 Telephone: Product information (800)	111 7515			23, 27		1 12 2 12 1 12 1 1 1 1 1 1 1 1 1 1 1 1
Telephone: Product information (800) Medical emergency (800)		326-Y-67975	<73	3, 4, 5, 8, 9,	.10; 13, 17, 1	8, 20, 22, 27
Transportation emergence	v (800) 424-9300	326-Y-67996	< 73	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22, 27
(CHEMTREC)	y (000) 121- 3300	326-Y-67999	<73	`3,`4,`5,`8,`9,	10, 13, 17, 1	8, 20, 22, 27
•		326-Y-68000	<73	3,4,5,8,9,	10, 13, 17, 1	8, 22, 27
Product: Polyurethane Enamels and Prin	ners	326-Y-68001	<73 <73	3,4,3,7,8,	9, 17, 18, 22	0.00.00.07
D.O.T. Hazard Class: Flammable Liquid		326-Y-68002 326-Y-68003	₹73 ×1	3,4,5,7,8	10, 13, 17, 1 9, 17, 18, 20	0,,20,,22,, <i>21</i>
Paint UN 1263	·	326-Y-68004	< 73	3 4 5 7 8	9, 17, 18, 19	20 22
·		326-Y-68020	< 73 €	3 4 5 8 9	10-13-17-1	8, 20, 22, 27
Section II — Hazardous Ingredients	•	326-Y-68075	< 73	3. 4. 5. 8. 9.	10:13:17.1	8, 20, 22, 27
This section lists all Du Pont Maintenand	ce Finishes products	326-Y-68088	<73 %	3, 4, 5, 8, 9,	10. 13. 17. 1	8, 20, 22, 27
sold in this classification and the hazard		326-Y-68131	<73 ·	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22,
each. For specific information regarding	the hazard(s)			23, 27		
associated with each ingredient, refer to	Section X. If you have	326-Y-68161	< 73 ⋅ ∫	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22, 27
a Du Pont Maintenance Finishes Polyure		326-Y-68176	< 73	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 21,
primer not specifically designated below			1	22, 27		242/4/19 19 19
the list of ingredients and then refer to S	Section X.	326-Y-68205	< 73	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 21, 22, 27
Product Flash Point °F	Hazardous	326-Y-68212	< 73 · ·	3,4,5,8,9,	10,513, 17, 1	8, 22, 27
	Ingredients	326-Y-68226	<73	3,4,5,8,9,	-10, 13, 17, 1 -10, 10, 17, 1	8, 22, 23, 27
•	-	326-Y-68231 326-Y-68233	<73 <73	3,4,5,6,9,		8, 20, 22, 27 8, 22, 23, 27
62-Y-001 < 73 9, 10, 19, 20,	22, 26, 28, 29	326-Y-68250		3)4\5\8\0	10, 13, 17, 10, 10, 13, 17, 1	8 20 22 27
	0, 12, 13, 17, 18, 20, 21,	326-Y-68251	₹73 %	3 4 5 8 9	10, 13, 17, 1	8, 20, 22, 23
22, 27 326-Y-6991 < 73 4, 5, 8, 9, 10,	12, 13, 17, 18, 20, 21,	326-Y-68255	<73	3. 4. 5. 8. 9.	10, 13, 17, 1	8. 20. 22. 27
22, 27	12, 10, 17, 10, 20, 21,	326-Y-68257	< 73 ···	3. 4. 5. 8. 9.	10, 13, 17, 1	8. 20. 22. 27
326-Y-12119 < 73 3, 4, 5, 8, 9, 1	0, 13, 17, 18, 20, 22, 27	326-Y-68258	<73	3.4.5.8.9.	10: 13: 17: 1	8.*20.*22.*27
	0, 13, 17, 18, 20, 22, 27	326-Y-68260	<73 <73	3,*4. 5. 8. 9.	.10. 13. 17. 1	8.122.127
326-Y-12789 < 73 4, 5, 8, 10, 13	, 17, 22, 23, 27	326-Y-68263	. (/3 '.	3. 4. 5. 8. 9.	-1013. 17. 1	8.20.22.27
326-Y-23309 < 73 3, 4, 5, 8, 9, 1	0, 13, 17, 18, 20, 21,	326-Y-68272	< 73	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 22, 27
22, 27	0 40 47 40 04 00 07	326-Y-68273 326-Y-68274	<73 <73	3,4,3,0,0,9,	10, 13, 17, 1 10, 13, 14, 1	7 10 22 27
	0, 13, 17, 18, 21, 22, 27	326-Y-68281	<73	3,4,5,0,9,	10, 13, 14, 1	8, 20, 22, 27
	0, 13, 17, 18, 21, 22, 27	326-Y-68282	<73	3 4 5 8 9	10, 13, 17, 1	8, 20, 22, 27
	0, 13, 17, 18, 21, 22, 23 0, 13, 17, 18, 22, 23, 27	326-Y-68283	<73°	3. 4. 5. 8. 9.	10, 13, 17, 1	8 20 22 27
	0, 13, 17, 18, 20, 22, 23,	326-Y-68286	<73	3. 4. 5. 8. 9.	10, 13, 17, 1	8, 20, 22, 27
24, 27.	0, 10, 11, 10, 20, 22, 20,	326-Y-68287	<73	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22, 27
	0, 13, 17, 18, 20, 22, 27	326-Y-68288	<73	3, 4, 5, 8, 9,	.10, 13, 17, 1	8, 20, 22, 27
	0, 13, 17, 18, 20, 22, 27	326-Y-68289	<73.\{	_. 3,\4,55,58,*9,	.10; _. 13,:17,∶1	8, 20, 22, 27
326-Y-67635 < 73 3, 4, 5, 8, 9, 1	0, 13, 17, 18, 20, 22, 27	326-Y-68293	< 73' ^	*3, 4, 5, 8, 9,	10, 12, 17, 1	8, 20, 22, 27
	0, 13, 17, 18, 20, 22,	326-Y-68296	< 73	3,4,5,8,9,	10, 13, 17, 1	8, 20, 22, 27
24, 27	0 40 47 40 00 00 07	326-Y-68298 326-Y-68304	<73 <73	3,4,5,8,9,	10, 13, 17, 1	8, 20, 23, 27 8, 22, 23, 27
	0, 13, 17, 18, 20, 22, 27 0, 13, 17, 18, 20, 22, 27	326-Y-68306	< 73 €	3, 4, 3, 6, 9, 4, 5 ; 8 ; 0 ; 11), 13, 17, 18, 17, 18,	0,722,743,727 21822827
	0, 13, 17, 18, 20, 22, 27	326-Y-68307	≥ 73 ⊜	3.4.5.8.9	10, 13, 17, 1	852210 336
	0, 13, 17, 18, 22	326-Y-68346	< 73	3.4.5.8.9.	10, 13, 17, 1	8, 20, 23, 27
	0, 13, 17, 18, 20, 22, 27	326-Y-68347	< 731	3, 4, 5, 8, 9	10, 13, 17, 1	8, 20, 22, 27
	0, 13, 17, 18, 20, 22,	326-Y-68349	<73	3, 4, 5, 8, 9,	. 10, 13, 17, 1	8, 20, 22, 27
24, 27		326-Y-68350	<73 ″;û	3,47,5∄8≱9,	.10 <u>,</u> `13, 17, 1	8, 20, 22, 27
	0, 13, 17, 18, 20, 22, 27	326-Y-68351	∴ !·< <u>7</u> 3 ()	3, 4, 5, 8, 9,	10, 13, 17, 1	8, 20, 22, 27
326-Y-67646 < 73 3, 4, 5, 8, 9, 1	0, 13, 17, 18, 20, 22, 27	326-Y-68354			10, 13, 17, 1	8, 20, 22,
	0, 13, 17, 18, 20, 22, 27		XI	≦ 23 ,/27,9 😹 :	1 - 53 7 - 1	W. 10 11 11 11 11 11 11 11 11 11 11 11 11
- 226.V-67694 / 72 2 4 6 9 0 1				. A . A . M A	45 446 -	
	0, 13, 17, 18, 20, 22, 27 0, 13, 17, 18, 20, 22, 27	326-Y-68384 326-Y-68386	< 73 \ !	·3, 4, 5, 8, 9,	10, 13, 17, 1 10, 13, 17, 1	8, 20, 22, 27

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Section II -	– Hazardous	Ingredients — Continued		826-Y-6334	< 73	5, 9, 10, 12, 17, 20, 22	
Product	Flash Point			826-Y-8247 826-Y-AK082	< 73 < 73	5, 9, 10, 12, 17, 19, 20 5, 9, 10, 12, 17, 21, 22), 22, 27
Code	(Closed Cu	p) Ingredients		826-Y-21667	< 73	5, 9, 10, 12, 17, 20, 22	i, 41) 97
326-Y-6838			. 27	826-Y-24160	< 73	5, 9, 10, 12, 17, 22, 23	
326-Y-6839		3, 4, 5, 8, 9, 10, 13, 17, 18, 20, 22	, 27	826-Y-54701	< 73	5, 9, 10, 12, 17, 20, 21	1. 22. 27
326-Y-6839				826-Y-67606	< 73	5, 9, 10, 12, 22	,,
326-Y-6839	4 < 73	3, 4, 5, 8, 9, 10, 13, 17, 18, 20, 22	, 27	826-Y-67651	< 73	5, 9, 10, 12, 17, 21, 22	2, 27
326-Y-6839		3, 4, 5, 8, 9, 10, 13, 17, 18, 20, 22	, 27	826 - Y-67683	< 73	5, 9, 10, 12, 17, 20, 22	2, 27
326-Y-6841		3, 4, 5, 8, 9, 10, 13, 17, 18, 21, 22		826-Y-67685	< 73	5, 9, 10, 12, 17, 20, 22	2, 27
326-Y-6841	1. < 73:	3, 4, 5, 8, 9, 10, 13, 17, 18, 20, 22		826-Y-67750	< 73	5, 9, 10, 12, 17, 21, 22	<u>2,</u> 27
326-Y-6841		3, 4, 5, 8, 9, 10, 13, 17, 18, 22, 27		826-Y-67768	< 73	5, 9, 10, 12, 17, 20, 22	
326-Y-6842		3, 4, 5, 8, 9, 10, 13, 17, 18, 20, 22		826-Y-67769	< 73	5, 9, 10, 12, 17, 22, 23	3, 27
326-Y-6842	4 70	3, 4, 5, 8, 9, 10, 13, 17, 18, 20, 22, 4, 7, 9, 11, 12, 17, 19, 20, 22, 27	, 41	826-Y-67787	< 73	5, 9, 10, 12, 17, 22, 23	3, 27
333-8234 333-54701		4, 7, 9, 11, 12, 17, 19, 22, 23, 27	1.5	826-Y-68077	< 73	5, 9, 10, 12, 17, 22, 23	
333-58209	< 73	4 7 9 11 12 17 19 22 23 27		826-Y-68193 826-Y-68194	< 73 < 73	5, 9, 10, 12, 17, 20, 22	2, 23, 27
333-67632	<.73	4, 7, 9, 11, 12, 17, 19, 22, 23, 27 4, 7, 9, 11		826-Y-68195	< 73	5, 9, 10, 12, 17, 20, 22 5, 9, 10, 12, 17, 20, 22	1, 23, 27 1, 22, 27
333-67632	< 73.	12, 17, 19, 20, 22, 27		826-Y-68197	< 73	5, 9, 10, 12, 17, 22, 23	:, 23, 21 2 97
333-67640		4, 7, 9, 11, 12, 17, 19, 22		826-Y-68261	< 73	5, 9, 10, 12, 17, 22, 23	3 27
333-68442	₹73 · ·	4, 7, 9, 11, 12, 15, 17, 19, 20, 22,	23	826-Y-68294	< 73	5, 9, 10, 12, 17, 22, 23	3, 27
333-68443		4, 7, 9, 11, 12, 17, 19, 22, 23		826-Y-68402 .	< 73	5, 9, 10, 12, 17, 21, 22	2, 23, 27
333-68443	< 73	4, 7, 9, 11, 12, 17, 19, 20, 22, 27		826-Y-71537	< 73	5, 9, 10, 12, 17, 20, 22	2, 27
333-77257	< 73	4, 7, 9, 11, 12, 17, 19, 22, 23, 27		826-Y-78387	< 73	5, 9, 10, 12, 17, 22, 27	1
333-H-7047		4, 7, 9, 11, 12, 17, 19, 22, 23, 27		826-Y-92443	< 73	5, 9, 10, 12, 17, 22, 23	3, 27
333-H-7049	5 < 73	4, 7, 9, 11, 12, 17, 19, 22, 23, 27		826-Y-93881	< 73	5, 9, 10, 12, 17, 20, 22	<u>2,</u> 27
	0 \ \ \ / \ / \ / \ / \ / \ / \ / \ / \	4, 7, 9, 11, 12, 17, 19, 22, 23, 27		826-Y-95741	< 73	5, 9, 10, 12, 17, 22, 23	3, 27
333-H-7054 333-H-7054	5 < 73	4, 7, 9, 11, 12, 17, 19, 22, 23, 27 4, 7, 9, 11		826-Y-98156 827-H-67343	< 73 < 73	5, 9, 10, 12, 17, 21, 22	2, 23, 27
333-H-7054	5 < 73	,12, 17, 19, 20, 22, 27		827-Y-44400	< 73	4, 5, 9, 10, 12, 13, 16, 5, 9, 10, 12, 13, 16, 17	11, 44, 41 7 99 97
333-H-7056	3 < 73	4, 7, 9, 11, 12, 17, 19, 22, 27		1P	< 73	1, 2, 6, 7, 22, 27	, 22, 41
333-H-7207		4, 7, 9, 11, 12, 17, 19, 20, 22, 27		2P	< 100	1, 2, 6, 7, 19, 22	
333-H-7207	1 < 73	4. 7. 9. 11. 12. 17. 19. 20. 22. 23.	27	3P	< 100	1, 2, 7, 10, 19, 22	·
333-H-7208	5 < 73			4P	< 100	1, 6, 7, 12, 19, 20, 22	
333-H-7210		4, 7, 9, 11, 12, 17, 19, 20, 22, 23,	27	5P	< 100	1, 2, 6, 7, 12, 19, 22, 2	23
338-Y-701	< /3	.4, 5, 8, 10, 17, 20, 22, 27 .4, 5, 8, 9, 10, 13, 17, 20, 22, 27		6P	< 100	1, 2, 7, 12, 17, 19, 22,	23 .
338-Y-6763 338-Y-6776		4,5, 8, 10, 17, 20, 22, 27		7P 8P	< 73	1, 2, 5, 6, 7, 20, 22, 23	3
338-Y-6776		4, 5, 8, 9, 10, 17, 22, 23, 27		9P	< 73 < 100	1, 2, 5, 6, 7, 21, 22 1, 2, 7, 12, 19, 20, 22	
338-Y-6835	7, < 73 ,	3, 4, 5, 8, 9, 10, 17, 18, 20, 22, 23	. 27	10P	< 73	1, 2, 7, 12, 19, 22, 23	
338-Y-6837	8 < 73	3, 4, 5, 8, 9, 10, 13, 14, 17, 18, 22	, 27	11P	< 100	1, 2, 6, 7, 12, 19, 22, 2	23
338-Y-6837	9 < 73 ;	4, 5, 8, 9, 10, 17, 20, 22, 27		12P	< 100	1, 2, 6, 7, 12, 19, 22,	23
338-Y-6838	0 < 73	4, 5, 8, 10, 17, 20, 22, 27	•	13P	< 73	1, 2, 5, 6, 7, 12, 19, 2	1, 22, 25
338-Y-6838	2 < 73 (4, 5, 8, 9, 10, 17, 20, 22, 27		14P	< 73	1, 2, 5, 6, 7, 12, 19, 2 ⁻¹	1, 22, 25
338-Y-6840		4, 5, 8, 10, 17, 20, 22, 27		15P	< 73	3, 4, 5, 8, 10, 11, 12,	13, 17, 18, 22
338-Y-6840	6 < 73	4, 5, 8, 10, 17, 20, 22, 27 4, 5, 8, 10, 17, 20, 21, 22, 27		16P	< 73	3, 4, 5, 8, 10, 11, 12,	18, 22
338-Y-6840 338-Y-6840		4, 5, 8, 10, 17, 20, 21, 22, 27		Section III F	Physical D	ata	
338-Y-6842	3 < 73	4,5,8,9,10,17,20,22,27					•
338-Y-6842		4, 5, 8, 10, 17, 20, 22, 27		Evaporation ra		man ether ate to appreciable, de	nondina an
369-67632			6, 27	color	ter. Moder	ate to appreciable, de	pending on
369-67633		4, 5, 8, 9, 10, 13, 17, 20, 22, 26, 2			olling range	e: 160°F-400°F	
369-67637		4, 5, 8, 9, 10, 12, 13, 17, 20, 22, 2	6, 27	Vapor density:			
369-67640				Percent volatile	by volume	e: 62% typical	
369-67641		4, 5, 8, 9, 10, 12, 13, 17, 20, 22, 2		Gallon weight:	11 lbs. typi	cal	
369-68154		3485,889,10, 11, 12, 17, 20, 22, 2		Section IV -	Eira and E	volceion Data	•
369-68230	< /3 < 73	. ⊹4∦5,(8≵9,∕10, 12) 13, 17, 20, 22, 2 ,(4,∕5,*8,∕9,∖10, 12) 13, 17, 22, 25	0, 21	Section IV — I		· •	
369-68264 826-H-6728	4 7 272	5, 9, 10, 12, 17, 20, 22, 23, 27	•	Approximate F		∟ımıts: 1-14% m, carbon dioxide, dr	u obomicel
826-H-6731		25, 9, 10, 12, 17, 20, 22, 23				dures: Full protective	
826-Y-373		5, 9, 10, 12, 17, 21, 22, 27		including se	If-containe	d breathing apparatus	equipment,
826-Y-508		5, 9, 10, 12, 17, 20, 22, 27		recommend	ed. Water f	from fog nozzles may	be used to cool
"826-Y-660				closed conta	ainers to pr	event pressure build	up.
				•	•	,	• •

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Section IV — Fire and Explosion Data — Continued

Unusual fire and explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately

and have names of ingredients available.

Inhalation: Overexposure may cause nose and throat irritation. May cause central nervous system effects such as dizziness, headache, nausea, staggering gait, confusion and unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

This product cannot be applied satisfactorily without the addition of an activator which contains an isocyanate. (See appropriate MSDS for recommended activator). Exposure to the isocyanate may cause permanent lung sensitization which produces asthma-like reactions including shortness of breath, wheezing, and coughing. These effects may be delayed for several hours after exposure. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to the vapors or spray mist. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause eye irritation with discomfort, tearing or blurred vision. Propylene glycol methyl ether acetate can be absorbed through the skin in harmful amounts. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. After activation with an isocyanate, may also cause allergic skin reactions.

In case of eye contact, immediately flush with plenty of water at least 15 minutes; call a physician.

In case of skin contact, wash with soap and water. If

irritation occurs, contact a physician.

Section VI - Reactivity Data

Stability: Stable

Incompatibility (materials to avoid): none reasonably foreseeable.

Hazardous decomposition products: CO, CO₂, smoke, oxides of heavy metals reported in Section X.

Hazardous polymerization: Will not occur.

Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled:
Ventilate area. Remove sources of Ignition. Prevent skin contact and breathing of vapor. Wear a properly fitted vapor/particulate respirator (NIOSH/MSHA TC-23C for paints, lacquers and enamels), eye protection, gloves and protective clothing. Confine and remove with inert absorbent. If the material has been activated with an Isocyanate, wear a positive pressure supplied air respirator (NIOSH/MSHA TC-19C if possible, otherwise TC-23C).

Deactivate isocyanate containing spills with: 20% Surfactant (Tergitol TMN-10 or equivalent)

80% Water

or 0-10% Ammonia

2-5% Detergent

Balance Water

Do not seal waste containers for 48 hours to allow CO₂ to vent.

Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers:

Section VIII - Special Protection Information

Respiratory: Do not breathe vapors or mists. Wear a respirator at all times when handling isocyanate activated materials. For spray painting, a positive pressure supplied air respirator (NIOSH/MSHA TC-19C) is required unless monitoring data confirms exposures to isocyanates will be below NIOSH recommended limits and exposures to solvents will be below 10 times the TLV. If exposures are below the above outlined limits; then a half mask, negative pressure vapor/particulate respirator approved by NIOSH/ MSHA (TC-23C) for paints, lacquers and enamels may be substituted. For mixing and brush or roll application, the positive pressure, supplied air respirator is recommended. but the 1/2 mask, negative pressure vapor/particulate respirator may be used. In no cases can the 1/2 mask respirator be used unless the wearer has been properly fit tested for the respirator. Individuals with a history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to this product when activated. Do not permit anyone without protection in the painting area.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Wear coveralls and impermeable gloves (e.g. neoprene). Do not reuse coveralls while solvent odor is retained in them.

Eye protection: Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guards or side shields.

Protective creams: May be used for ease of clean up, not for protection.

Seciton IX — Special Precautions

Precautions to be taken in handling and storing. Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating and smoking. Do not store above 120°F.

Other precautions: Do not sand, flame cut, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation.

Section X — Additional Information

Following is a summary of the ingredients listed in Section II and their known hazards.

Section X - Additional Information - Continued

7	•		vapor Pressure	
Ingredient No.	Name Putul sectors	CAS No. 123-86-4	(mm Hg @ 20°€)	Exposure Limits
1.	Butyl acetate	123-00-4	8	150 ppm-A 150 ppm-0
	high concentra			od changes
nd weakr	ness in laborato	ry animals.	•	
2.	n-Butyl alcohol	71-36-3	4	50 ppm-A Ceiling
				100 ppm-0
		•		25 ppm-D
				50 ppm-D
lay cause	moderate eye	burning.		• •
3.	Acetone	67-64-1	186	750 ppm-A 1000 ppm-0
4.	Methyl ethyl	78-93-3	95	200 ppm-A
" . .	ketone			200 ppm-0
igh conce	entrations have	caused en	nbryotoxic e	
	animals. Methy			

i ign concentrations have caused embryotoxic effects in l. boratory animals. Methyl ethyl ketone has been cemonstrated to potentlate (i.e., shorten the time of onset) the peripheral neuropathy caused by either n-Hexane or Methyl n-butyl ketone. MEK by itself has not been demonstrated to cause peripheral neuropathy.

5. Toluene 108-88-3 29 100 ppm-A 200 pmm-0

Tests in animals have shown liver, bone marrow and kidney effects.

6. Isopropyl 67-63-0 44 400 ppm-A alcohol 400 ppm-O

Llay cause eye irritation with discomfort, tearing, or blurred vision. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. High oral doses have caused anemia in laboratory animals.

imals.
7. 2-Ethoxy-ethyl 111-15-9 1.7 5 ppm-A skin
200 ppm-O skin
10 ppm-D skin

Repeated exposure to high concentrations may cause injury to the bone marrow and blood cells, kidney, liver and testes. Exposure of female laboratory animals has resulted in increased fetal mortality, delayed fetal development and birth defects.

8. Mixed dibasic 14 10 mg/m³-D

esters
May cause eye irritation with discomfort, tearing, or blurred vision. High airborne levels in rats have shown mild injury to the olfactory region of the nose.

9. Ethyl acetate 141-78-6 74 400 ppm-A 400 ppm-O

Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs.

10. Propylene 108-65-6 3.8 None glycol monomethyl ether acetate

May cause eye Irritation with discomfort, tearing, or blurred vision. May cause moderate eye burning. Can be absorbed through the skin in harmful amounts.

11.			1867 - 25 ppm-S33
	monobutyl ether	20 ppm-D	
	acetate		skin

Can be absorbed through the skin in harmful amounts. May destroy red bood cells. May cause abnormal kidney function.

12. Xylene 1330-20-7₁₂ 25_{3,4,5113} 100 ppm-A

High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts.

13.	Aromatic '	া 64742-পূর্বে ক্রমের তি সংগ্রে । 50 ppm-Dণ া ব 9546x া জন্মটোর স্থানির টোনের নির্মান
	hydrocarbon	of a 9516 Collegation prelimation of factors.
14.	Cobalt	68186- None AND YNONE
	aluminate	86-7

The components of this pigment are combined chemically into a uniform substance which does not necessarily reflect the properties of the component metals or oxides.

15.	Chrome	68186-	None	0.5 mg/m ³ -A as
	Antimony	90-3		antimony (Sb)
	Titanate; CI		•	0.5 mg/m³-0,
	Brown 24			as antimony
	,		おりしょうか	CONTROL WORKS

Repeated and prolonged overexposure may lead to chronic lung disease. Antimony and nickel are incorporated into the crystal structure of titanium dloxide. As such they are chemically and biologically inert.

		•		2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
16. 17.	Aluminum Amorphous silica	7429-90-5 7631-86-9	None	1 mg/m³-A -1 mg/m²-A 1.5 mg/m³-0
	4			6 mg/m³-D 3 mg/m³-S
				Respirable
18.	Cellulose acetate butyrate	9004-36-8	None	None
19,	Carbon black	1333-86-4	None	3.5 mg/m ³ -A
	•			$3.5 \text{mg/m}^3 - 0$
20.	Iron oxide	1309-37-1	None	
21.	Lead chromate	18454- 12-1	None	150 ug/m³-A, as lead (Pb)
				50 ug/m³-0, as lead (Pb)
		•		50 ug/m³-A, as
				chromium (Cr)
				0.1 mg/m ³ -0,
				as chromium
				(Cr)

Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA lead standard 29 CFR1910.1025. Is an IARC, NTP or OSHA carcinogen.

22.	Non-hazardous polymer	None	None	None
23.	Non-hazardous	None	None	None
	organic pigment			

Section X — Additional Information — Continued

Ingredient No. Name CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits
24. Nickel, 8007-18- Antimony,	9 None	0.5 mg/m ³ -A,
Titanium Yellow		as antimony (Sb)
Pigment.		0.5 mg/m^3-0 ,
		as antimony
		(Sb)

Description 1

Antimony and Nickel are incorporated into the crystal structure of titanium dioxide. As such they are chemically and biologically inert.

25.		1309-64-4	None	0.5 mg/m³-A as antimony (Sb)
		reger per di		0.5 mg/m³-0,
	•			as antimony
				(Sb)
			•	0.2 mg/m³-D,
	• •			as antimony
11111				(Sb)

Excessive exposures to antimony may produce gastrointestinal upset, nervous complaints, inflamation of the mucous membranes of the nose and throat, metallic taste and stomatitis. May cause skin irritations. Cancer hazard based on tests with laboratory animals. Overexposure may create cancer risk.

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26.	Hydrous Magnesium silicate	14807- 96-6	None	2 mg/m³-A, respirable, no asbestos
				5 mg/m ³ -0
				Asbestos free
	•			2 ma/m³-D

Repeated and prolonged overexposure to take may lead to typical X ray changes and chronic lung disease.

27.	Titanium dioxide	13463- 67-7	None	10 mg/m³-A, as titanium (Til)
				• , •

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workspace.

28.	Barium Lanolate	61788- 47-4	None	0.5 mg/m ³ -A as barium (Ba)
		47-4 .		0.5 mg/m ³ -0 as
	•			barium (Ba)

May cause central nervous system effects such as muscular weakness and loss of coordination. May cause anemia. Repeated and prolonged overexposure may lead to chronic lung disease.

29. Zinc Oxide 1314-13-2 None 10 mg/m³-A Key: A = ACGIH O = OSHA D = Du Pont S = Supplier

Notice: The data in this Material Safety Data Sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

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Product Manager Maintenance Finishes



MATERIAL SAFETY DATA SHEET

MAINTENANCE FINISHES November 18, 1985

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URETHANE ACTIVATORS AND CLEARS

Section 1

Manufacturer

E. I. du Pont de Nemours & Company, Inc. Finishes & Fabricated Products Department

Wilmington, DE 19898

Telephone: Product Information (800) 441-7515 Medical emergency (800) 441-3637

Transportation emergency (800) 424-9300

(CHEMTREC)

Product: Imron® Polyurethane Activators and Clears

Section II - Hazardous Ingredient Listing

This section lists all Du Pont Maintenance and Transportation Finishes products sold in this classification and the hazardous ingredients in each. For specific information regarding the hazard(s) associated with each ingredient, refer to Section X. If you have a Du Pont Maintenance and Transportation Finishes urethane activator or clear not specifically designated below, check the label for the list of ingredients and then refer to Section X.

Product	Flash Point °F	Hazardous
Code	(Closed Cup)	Ingredients
RK-808	< 100	7, 9, 10, 11, 13
RK-5406	< 100	7, 9, 10, 11, 13
VG-1450	< 100	3, 4, 6, 8, 10, 12
VG-6005	> 100	3, 4, 10, 12
VG-Y-250	59	6, 7, 9, 11, 14
VG-Y-511	< 73	3, 4, 5, 6, 7, 9, 10, 12
VG-Y-518	> 100	3, 4, 7, 10, 12
VG-Y-710	> 100	3, 4, 7, 10, 12
VG-Y-719	< 73	3, 4, 6, 9, 10, 12
192\$	<73	3, 4, 6, 10, 12
792S	< 73	3, 4, 6, 10, 12

Section III - Physical Data

Evaporation rate: Slower than ether	Vapor density: Heavier than air
Solubility in water:	Percent volatile by volume:
Moderate to appreciable	62% typical
Approximate boiling range:	Gallon weight:
170°F-400°F	8 lbs. typical

Section IV - Fire & Explosion Data

Approximate flammable limits: 1-15%

Extinguishing media: Foam, carbon dioxide, dry chemical. Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire and explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician

immediately and have names of ingredients available. Inhalation: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing or coughing. This effect may be delayed for several hours after exposure. Individuals with lung or breathing problems or prior reaction to isocyanates must not be exposed to vapors or spray mist of this product. Overexposure to solvents may cause nose and throat irritation. May cause central nervous system effects such as headache, dizziness, nausea, and icss of consciousness Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage If affected by inhalation of vapor or spray mist, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing difficulty persists, or occurs later, consult a physician a second second

Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact; may cause skin irritation with discomfort and dermatitis. May also cause allergic skin reactions. In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician in case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

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Section VI — Reactivity Data Willering or Annual VI leads

Stability: Stable in sealed containers. Do not mix enamel and activator until ready to use Incompatibility (materials to avoid): Water, alcohols, amines. Hazardous decomposition products: CO, CO₂, smoke. Hazardous polymerization: Will not occur.

Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Wear a positive pressure supplied air respirator (NIOSH/MSHA TC-19C if possible; otherwise NIOSH/MSHA TC-23C), eye protection, impermeable gloves and protective clothing. Confine and remove with inert absorbent.

Deactivate Isocyanate containing spills with: 204 20% Surfactant (Tergitol TMN-10 or equivalent) 80% Water

or

0-10% Ammonia

2-5% Detergent

Balance Water

Pour decontamination solution over the spill and allow to sit 10 minutes, minimum.

- M 350

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Do not seal waste containers for 48 hours to allow CO2 to 20 vent.

Waste Disposal Method: Do not allow material to contaminate or ground water systems. Incinerate absorbed material in with accordance with federal state and local requirements. Do not incinerate in closed containers.

2747.10(1)

Section VIII — Special Protection Information

ON ARBOY O'NEAR ADDRESS.

BROWN OF MARK STARS.

Respiratory: Do not breathe vapors or mists. Wear a respirator at all times when handling isocyanates or isocyanate activated materials. For spray, painting, a supplied air respirator (NIOSH/MSHA positive pressure TC-19C) is required unless monitoring data confirms exposures to isocyanates will be below NIOSH recommended limits and exposures to solvents will be below 10 times the TLV. If exposures are below the above outlined limits, then a halfmask, negative pressure vapor/particulate respirator (NIOSH/MSHA TC-23C for paints, lacquers and enamels) may be substituted. For mixing and brush or roll application, the positive pressure, supplied air respirator is recommended, but the 1/2 mask, negative pressure vapor/ particulate respirator may be used. In no cases can the 1/2 mask respirator be used unless the wearer has been properly fit tested for the respirator. Follow respirator manufacturer's directions for use. Individuals with a history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to this product when activated. Do not permit anyone without protection in the painting area. And a capt becomes a second

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Wear coveralls and impermeable (e.g. neoprene) gloves. Do not reuse coveralls while solvent odor is retained in them.

Eye protection: Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guards or side shields.

Protective creams: May be used for ease of clean up, not for protection.

Section IX — Special Precautions I notice against the section in t

Precautions to be taken in handling and storing. Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating and smoking. Do not store above 120°F.

Other precautions: Do not sand flame out, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation of the condition of the c

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Section X — Additional Information and Additiona

	in Machinera	e or gard.	'CM Vapor	
Ingredient No.	Name	CAS No.	Pressure (mm Hg @ 20°C)	Exposure Limits
3. (1, 6 Hexamethylene diisocyanate	822-06-0	on the first sec	5 ppb-D 20 ppb-S ceiling

May cause upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. This condition may be permanent. Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure. Prolonged skin contact may

cause chemical burns. Liquid splashes in the eye may result in chemical burns. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures.

4. Butyl acetate 123-86-4 8 150 ppm-A 150 ppm-0

Extremely high concentrations have caused blood changes and weakness in laboratory animals.

5. Toluene 108-88-3 29 100 ρpm-A 200 ppm-O

Tests in animals have shown liver, bone marrow and kidney effects.

6. Ethyl acetate 141-78-6 74 400 ppm-A 400 ppm-0

Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs.

7. Propylene 108-65-6 3.8 None glycol monomethyl ether acetate

May cause eye irritation with discomfort, tearing, or blurred vision. May cause moderate eye burning. Can be absorbed through the skin in harmful amounts.

8. 2- 112-07-2 0.3 25 ppm-S skin
Butoxyethyl 20 ppm-D skin
acetate

Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function.

9. Xylene 1330-20-7 25 100 ppm-A 100 ppm-0

High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney Injury. Can be absorbed through the skin in harmful amounts.

10. Aromatic 64742-95-6 10 50 ppm-D hydrocarbon
11. Toluene 584-84-9 10 5 ppm-A disocyanate 20 ppb-O ceiling

May cause upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. This condition may be permanent. Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure. Prolonged skin contact may cause chemical burns. Liquid splashes in the eye may result in chemical burns. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures. One study of workers in a TDI manufacturing plant has reported that certain workers exposed to higher levels of TDI had larger declines in lung function (over the five year period of study) than other worker groups in the study experienced excursions above the 0.02ppm level.

Section X — Additional Information — Continued

Ingredient No.	Name	CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits	
12.	Aliphatic polyisocyanate	28182- 81 - 2	None	1 mg/m³ S	

May cause allergic skin rash, itching, swelling. Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures.

13.	Non-hazardous	None	None	None
	polymer			

14. Aromatic 584-84-9 None None polyisocyanate

May cause allergic skin rash, itching, swelling. Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures.

Exposure Limit Key: A = ACGIH D = DUPONT O = OSHA S = SUPPLIER

Notice: The data in this Material Safety Data Sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

Product Manager Maintenance Finishes



MATERIAL SAFETY DATA SHEET

MAINTENANCE FINISHES November 18, 1985

(Cleran Cup)

(USE FOR PRODUCTS STARTING WITH THE FOLLOWING PREFIXES: 28, 29, 63, 65, 66, 67, 75, 80, 81, 88, 89, 93, 96, 112, 113, 166, 181, 183, 210, 347, 354, 360, 373, 481, 523, 529, 612, 621, 631, 639; 657, 681; 802; 818; 823; 825, 840, 881, 909, 917, 918, 929, 934, 939, 943, 951, 964, 994, 995, 1065, 1081, 1657, 1681, VF, VG (NON-ISOCYANATE), VQ, 704C, 1000, 1

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Section I			63-1696	<73 1, 57, 59, 84, 95, 105, 109, 113, 114,
Manufacturer E. I. du Pont de Nemours & Company, Inc.			63-1697	116, 117, 119 <73 1, 57, 59, 84, 95, 105, 109, 113, 114,
Finishes &	Fabricated F	Products Department	63-1858	<73 1, 17, 57, 59, 84, 88, 95, 105, 109,
	n, DE 19898 : Product info	ormation (800) 441-7515	63-Y-008 [°]	113, 114, 116, 117, 119 <73 11, 17, 25, 27, 47, 60, 88, 95, 105, 109,
·		ergency (800) 441-3637	65-3010	111,112,5113, 114,116, 118,119,00 73 (557,59,77,84,105,109,111,113,5)
	(CHEMTRE	ion emergency (800) 424-9300 C)		- 1
Product: Solve	ent based pa	aints (other than Isocyanates)	65-3012	< 73 25, 27, 57, 59, 77, 84, 95, 105, 109, 111, 112, 113, 116, 119
Coation II	Hanardaua	Ingradiant Listing	65-3055	<100 25, 27, 57, 59, 77, 84, 88, 105, 109,
		Ingredient Listing	66-Y-315	54/59/104, 105, 111, 113, 114, 117, 119
hazardous inc	redients in e	ngs sold in this classification and the each. For specific information	67-800	> 100 25, 42, 47, 51, 59, 73, 95, 105, 111,
regarding the	hazard(s) as	ssociated with each Ingredient, refer	•	- 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Du Pont Maintenance Finishes nate) material not specifically	67-Y-746	1151 21118, 25, 95, 105, 109, 111, 113, 116, 116, 117, 118, 116, 117, 118, 117, 118, 117, 118, 118, 118
designated be then refer to \$		he label for the list of ingredients and	67-Y-773	<100.51/25,/27,/51, 95, 105, 109, 112, 113, 113, 114, 115, 116, 118, 117, 118, 118
	Flash Point °	F Hazardous	67-Y-789	<73 120,21,37,45,57,59,79,95,104,
Code	(Closed Cup)		67-Y-813	イルデスを105、109、1114、113、1114、118 学校では <73 を11で59、73で95、105、109、113、114、116
704C	> 100	105, 113	67-Y-834	<100° (\$28,25,66,95,4105,109,111,413, 1) 44 (\$41,6,41,19)
RK-5801 RK-Y-5024	> 100 < 73	13, 29, 59, 105 · 27, 105, 112	75-Y-65083	< 100 \\54,57,59,88,\104,105,113,\114\8\8
VF-724	< 69	17, 25, 83, 93	80-Y-495	X1: 04:117,11194 <100, 331,51,557,559, 88,95, 105, 113,2114g
VF-730 VF-Y-632	< 73 < 73	25, 27, 35, 51, 57, 59, 104, 105, 116 25, 27, 35, 47, 51, 57, 104, 105, 116	81-5090	도 :117,計19 년 : < 100 - 전체, 54,57,59, 88, 95, 104, 105, 111,
VF-Y-703 VG-Y-8339	< 73 < 73	25, 27, 35, 47, 51, 57, 104, 105, 116 17, 20, 24, 25, 27, 35, 57, 105		VC 4 (1.13)(1.14)(1.17)(1.19)
VG-Y-8499	< 73	27, 105	81-Y-688	<73* %1,217,325,427, 79,85,88,104,4105,50 %109,112,113,114,116
VG-Y-8522 VQ-Y-5465	< 73 > 100	27, 105 18, 109, 113	81-Y-5041	<73 (6.1/17/25)27, 40/45, 57, 59(88)105, €
28-616	> 100	1, 25, 47, 51, 60, 105, 109, 113, 116,	81-Y-5203	106, 109, 1112, 113, 114, 117 <100 11, 25, 51, 57, 59, 88, 95, 105, 106, 2
28-650	> 100	117, 119 1, 25, 51, 57, 60, 85, 104, 105, 109,	81-Y-5252	<113,114,117,119 <100 11,17,25,51, 88,95, 104, 105, 106,
		113, 117 1, 25, 51, 85, 88, 104, 105, 109, 112,	81-Y-5254	\;\;\1.13,\1.17.\; <100\:\1.25\\51\(\frac{1}{100}\\\101\\\105\\\113\\\\0.0\\
28-5181	< 100	113, 116, 119	81-Y-8688	< 100 \\(\)\(\)\(\)\(\)\(\)\(\)\(\)\(\)\(\)\(
28-8200	< 100	1, 25, 51, 104, 105, 109, 112, 133, 116, 117, 119	81-Y-24785	< 73 ***1,617,25,427,45;57,59,76,88,105,
28-Y-5049	> 100	1, 25, 57, 104, 105, 109, 113, 116,	81-Y-24910	<100 1,17,25,51,57,88,95,104,105,
28-Y-5061	> 100	117 1, 25, 51, 57, 59, 88, 105, 113, 117		- 1、1、2016年 106, 113, 114, 11, 7 6-16。 最初的企業
28-Y-5101 28-Y-5159	. > 100 86	1, 25, 51, 57, 59, 88, 105, 113, 117 1, 17, 25, 51, 88, 104, 105, 113, 117	81-Y-26596	<73 a 11,17,25,27,40,45,59,400,101, 6 (2105,409,112,113,114,417,7,7,8,9)
28-Y-13035	> 100	1, 17, 25, 51, 88, 95, 104, 105, 113,	81-Y-26685	< 73 \(\) 17\(\) 25\(\) 27\(\) 40\(\) 45\(\) 59\(\) 88\(\) 95\(\) 105\(\) \(\) \(\) 31\(\) 31\(\) 43\(\) 14\(\) 17\(\) \(\) 32\(\) 32\(\) 40\(\) 45\(\) 59\(\) 88\(\) 95\(\) 105\(\) 31\(\) 31\(\) 43\(\) 14\(\) 117\(\) 32\
28-Y-13036	> 100	117 1, 25, 40, 57, 88, 95, 105, 109, 113,	81-Y-27922	<73 1,417, 25,51, 88, 95, 104, 105, 113,
		117	81-Y-28281	<100 \((1.14) 1.17 \) 25, 27, 47, 57, 59, 79, 85, 88,
28-Y-13042	> 100	1, 25, 57, 59, 85, 88, 95, 104, 105, 109, 113, 117		495%104, 105, 106, 109, 112, 113, 114, 114, 115, 114, 115, 114, 115, 115
29-625	> 100	51, 60, 105, 117	81-Y-43094	< 100 < 1,77,25,88, 105, 106, 109,113,114,
29-632	> 100	59, 60, 88, 105		117 14

S	ection II –	- Hazardous In	gredients — Continued	96-Y-23663	< 100	1, 17, 25, 51, 88, 101, 104, 105, 113,
	Product Code	Flash Point °F (Closed Cup)	Hazardous Ingredients	96-Y-23664	< 100	114, 117 1, 17, 25, 88, 100, 105, 106, 109, 112,
		<73	, 17, 25, 27, 59, 76, 88, 101, 105, 109,	96-Y-23665	< 100	113, 114 1, 25, 51, 57, 59, 88, 104, 105, 106,
	88-762	< 100 , 2	12, 113, 114, 117 25, 27, 76, 88, 105, 109, 112, 113, 114	96-Y-23666	< 100	113, 114, 117 1, 17, 25, 51, 88, 95, 104, 105, 106,
	88-28034	g georgius ac leg t	7.17, 25, 27, 57, 59, 60, 88, 95, 105, 09, 112, 113, 114, 117	96-Y-35472	< 100	113, 114, 117 1, 17, 25, 51, 88, 95, 101, 104, 105,
	88-H-72177		, 17, 25, 51, 57, 59, 88, 104, 105, 106, 12, 113, 117	96-Y-62279	< 100	113, 114, 117 1, 17, 25, 51, 88, 95, 104, 105, 113,
	88-Y-8006 89-Y-5202	6 < 73 \ 2	5,51,59,88,104,105,109,113,114 5,27,51,59,79,95,104,105,111, 12,113,114,116,118	96-Y-62280	< 100	114, 117 1, 17, 25, 51, 88, 95, 104, 105, 106,
	89-Y-8002	<73 2	15, 27, 51, 59, 79, 95, 104, 105, 109, 11, 112, 113, 114, 116, 118	96-Y-63446	< 100	113, 114, 117 1, 17, 25, 51, 88, 95, 104, 105, 113,
	93-005 : 93-082	< 73 1	7, 25, 88, 105, 109, 112, 113, 114 , 17, 25, 57, 59, 60, 88, 100, 101, 105,	96-Y-63447	< 100	114, 117 1, 17, 25, 51, 88, 95, 104, 105, 113,
	93-421	tir its in M	09,:112,:113, 114, 117 , 17, 25,:57, 59, 60, 88, 100, 101, 105,	96-Y-63449	< 73	114, 117 1, 17, 25, 51, 88, 101, 104, 105, 106,
		20 1 B 1 1	09,412,113,114, 117 , 17, 25,157, 59, 60, 88, 95, 105, 106,	96-Y-67608	< 100	113, 114, 117 1, 17, 25, 51, 88, 95, 104, 105, 106,
		jej, stalitet 1	09, 112, 113, 114, 117 , 17, 25, 57, 59, 60, 88, 100, 101, 105,	96-Y-67609 96-Y-67610	< 100 < 100	113, 114, 117 1, 17, 25, 51, 104, 105, 113, 114, 117 1, 17, 25, 51, 88, 95, 104, 105, 106,
	93-1863	1	09, 112, 113, 114, 117 , 17, 25, 57, 60, 79, 88, 100, 105, 106.	96-Y-67611	< 73	113, 117 1, 17, 25, 51, 104, 105, 113, 117
		1	09, 112, 113, 114, 117 , 17, 25, 57, 59, 60, 88, 100, 101, 105,	96-Y-67632	> 100	1, 51, 57, 59, 88, 95, 105, 106, 113, 114, 117, 119
	Sec. 16. 10. 10.	t t t av 1.7 1	09, 112, 113, 114, 17 , 17, 25, 57, 59, 60, 79, 88, 100, 105,	96-Y-67633	< 100	1, 17, 25, 51, 88, 95, 104, 105, 106, 113, 114, 117
		1	09, 112, 113, 117 , 17, 25, 57, 59, 60, 88, 95, 105, 106,	96-Y-67635	< 100	1, 17, 25, 51, 88, 95, 104, 105, 113, 114, 117
	• •	1	09, 112, 113, 117 , 17, 25, 57, 59, 60, 88, 100, 105, 106,	96-Y-67636	< 100	1, 17, 25, 51, 88, 95, 101, 104, 105, 113, 114, 117
٠	93-77257	1 < 73 to 7.1	09,112,113,114,117 ,17,25,57,59,60,88,105,106,109,	96-Y-67637	< 100	1, 17, 25, 51, 88, 95, 104, 105, 113, 114, 117
	93-77968	< 73 1	.12, 113, 114, 117 . 17, 25, 57, 59, 60, 88, 105, 106, 109,	96-Y-67638	< 100	1, 17, 25, 51, 88, 95, 104, 105, 106, 113, 114, 117
	96-Y-670	· · < 100 331	12, 113, 114, 117 , 25, 85, 104, 105, 106, 109, 113, 114,	96-Y-67639	< 100	1, 17, 25, 51, 88, 95, 104, 105, 106, 113, 114, 117
	96-Y-673	<100	.:17, 25, 51, 88, 100, 101, 104, 105,	96-Y-67640 96-Y-67641	< 100 < 100	25, 57, 88, 105, 113, 114 1, 17, 25, 51, 88, 95, 104, 105, 113,
	96-Y-12119	<100 51	13,1114,1117 ,117,125,151, 88, 95, 104, 105, 106,	96-Y-67642	< 73	114, 117 1, 17, 25, 51, 57, 59, 95, 101, 104, 105,
	96-Y-12120	701 <100 5011 M = 30 70 761	13,41,43117 ,417,225,51, 88, 95, 104, 105, 106,	96-Y-67645	< 100	106, 113, 114, 117 1, 17, 25, 51, 88, 95, 104, 105, 113, 114, 117
	96-Y-12121	< 100 · · · 1	13, 114, 117, 117, 117, 117, 117, 117, 117	96-Y-67646	< 100	1, 17, 25, 51, 88, 95, 104, 105, 106, 113, 114, 117
	96-Y-12122	< 100 11 101	, 17, 25, 51, 88, 100, 101, 104, 105,	96-Y-67846	< 100	1, 17, 25, 51, 88, 95, 104, 105, 106, 113, 114, 117
	96-Y-12792	<∖100 ≒! ≩1	, 17, 25, 51, 88, 95, 104, 105, 106, 12, 113, 114, 117	96-Y-67999	< 100	1, 17, 25, 51, 88, 95, 104, 105, 106, 113, 114, 117
	96-Y-12793	< 100 : '1	17, 25, 51, 88, 104, 105, 106, 112, 13, 114, 117	96-Y-68176	< 100	1, 17, 25, 51, 88, 95, 101, 104, 105, 113, 114, 117
	96-Y-13035	< 100 - 1	, 17, 25, 51, 88, 95, 104, 105, 113, 14, 117	96-Y-68205	< 100	1, 17, 25, 51, 88, 100, 101, 104, 105, 113, 114, 117
	96-Y-13042	< 73 1	, 17, 25, 51, 88, 95, 104, 105, 106, 13, 114, 117	96-Y-68224	< 73	1, 17, 25, 27, 51, 79, 85, 88, 95, 104, 105, 112, 113, 114, 116, 117
	96-Y-23309	< 100 1 1	, 17, 25, 41, 51, 57, 59, 88, 95, 104, 05, 106, 113, 114, 117	96-Y-68224	<73	1, 17, 25, 27, 51, 79, 85, 88, 95, 104, 105, 112, 113, 114, 116, 117
	96-Y-23662		, 25, 51, 88, 100, 101, 104, 105, 113, 14	96-Y-68233	< 100	1, 17, 25, 51, 104, 105, 106, 113, 114, 117

Contraction (CA)

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$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	Section II -	- Hazardous In	gredients — Continued	657-Y-8123	< 73	1, 25, 57, 88, 103, 104, 105, 109, 112,
	Product Code	Flash Point °F (Closed Cup)		657-Y-8526	<73	113, 114 17, 22, 25, 73, 88, 104, 105, 109, 112,
	481-5085	< 100	20, 25, 47, 57, 65, 88, 95, 104, 105, 13, 114, 116, 117	657-Y-8583	< 73	114, 118 1, 22, 51, 59, 79, 88, 95, 103, 104, 105,
	481-5086	< 100 PA	17; 57, 65, 80, 95, 104, 105, 113, 114, 16,0117; 119	657-Y-9010	< 73	109, 113, 117 1, 17, 22, 25, 27, 51, 88, 95, 104, 105, 112, 113, 114, 117
	481-5202	银河的 網國		657-Y-9029	< 73	
->	481-8046	< 100	17, 57, 65, 95, 104, 105, 113, 114, 116, 117, 119	•	•	118
	481-H-63015	< 100 114	17, 57, 65, 95, 104, 105, 113, 114, 116, 117, 119	657-Y-9102	< 73	1, 17, 22, 25, 51, 57, 59, 88, 95, 104, 105, 106, 109, 112, 113, 114, 117
· · · · · · · · · · · · · · · · · · ·	481-H-63019	< 100 4	17, 57, 65, 95, 104, 105, 113, 114, 116, 17, 119	657-Y-9106	· <73	1, 17, 22, 25, 32, 34, 51, 88, 95, 104, 105, 106, 109, 112, 113, 114, 117
	523-503	<73 *** ³ 1	10, 17, 20, 25, 44, 45, 57, 85, 95, 105, 116, 117	657-Y-12121	<73	1, 22, 25, 51, 57, 59, 88, 104, 105, 106, 112, 113, 114, 117
	523-504	<73 ^{1.13} 1	1, 17, 20, 25, 45, 57, 85, 95, 105, 116, 117	657-Y-12123	< 100	22, 25, 34, 51, 88, 103, 104, 105, 113, 114
	529-ZB201 612-A706	> 100 ½ <73 ½	39, 60, 83, 88, 95, 104, 111, 116 25, 57, 60, 105, 113	657-Y-12125	< 73	1, 17, 22, 25, 40, 51, 88, 95, 104, 105, 112, 113, 114, 117
	612-B706	-	32, 108, 113	657-Y-12127	< 73	1, 17, 22, 25, 51, 57, 100, 101, 104, 105, 112, 113, 114, 117
	612-C706 621-Y-9092	<73 1	25, 57, 60, 82, 105, 108, 113 , 22, 25, 54, 70, 79, 104, 105, 112, 113, 116, 117, 119	657-Y-12135	< 73	1, 17, 22, 25, 51, 57, 88, 95, 104, 105, 106, 109, 112, 113, 114, 117
	631-Y-739	<73 1	, 25, 59, 88, 95, 103, 104, 105, 109, 12, 113, 117	657-Y-12160	< 73	1, 17, 22, 25, 32, 34, 51, 57, 104, 105, 106, 112, 113, 114, 117
	639-Y-987	> 100 1	, 17, 25, 27, 57, 59, 79, 83, 88, 95, 04, 105, 106, 113, 114, 117, 119	657-Y-12797	<73	1, 17, 22, 25, 32, 34, 51, 57, 95, 104, 105, 106, 112, 113, 114, 117
	639-Y-988	> 100 11	1, 17, 25, 27, 57, 59, 79, 83, 88, 95, 04, 105, 106, 113, 114, 117, 119	657-Y-68388	< 73	1, 17, 22, 25, 51, 57, 59, 60, 88, 95, 104, 105, 106, 112, 113, 114, 117
	639-Y-5701	> 100 1	104, 105, 111, 113, 114, 117, 119	657-Y-68425	. < 73	1, 17, 22, 25, 51, 57, 59, 60, 88, 95,
	639-Y-5702 639-Y-5711 639-Y-5712	> 100 / 5	.04, 105, 111, 113, 117, 119 59, 104, 105, 113, 114, 117, 119 59, 104, 105, 113, 114, 117, 119	681-704	< 73	104, 105, 106, 112, 113, 114, 117 16, 17, 31, 57, 67, 80, 83, 95, 104, 105,
	639-Y-5721 639-Y-5722	· ; > 100 - ;5	59,104, 105, 113, 114, 117, 119 59,104, 105, 113, 114, 117, 119	681-705	< 73	113, 114, 116 16, 17, 31, 57, 67, 80, 83, 95, 104, 105, 113, 114, 116
	639-Y-5811 639-Y-5812	> 100 35	59, 104, 105, 113, 114, 117, 119 59, 104, 105, 113, 114, 117, 119	681-8038	< 100	25, 27, 57, 60, 79, 95, 103, 104, 105, 109, 111, 113, 116, 118
	657-Y-771	<73	, 17, 22, 25, 32, 34, 51, 57, 95, 104, 05, 106, 107, 112, 113, 114, 117	681-9049	< 73	1, 22, 25, 57, 59, 95, 104, 105, 199, 111, 112, 113, 114, 118
	657-Y-845	1 1 1 1 1 1 1 1	,17, 22, 25, 35, 51, 57, 76, 88, 104, 05, 106, 109, 112, 113, 114, 117	681-Y-702	< 73	22, 25, 35, 57, 79, 95, 104, 105, 111, 112, 113, 114, 116, 119
	657-Y-864	医环性 经通过	(3) 7, 22, 25, 32, 34, 51, 88, 100, 101, 103, 104, 105, 109, 112, 113, 117	681-Y-9032	< 73	18, 22, 25, 27, 51, 59, 95, 104, 105, 109, 111, 112, 113, 114, 116, 118
		医焦豆豆 环域	, 17, 22,25, 51, 57, 95, 101, 104, 105, 06, 109, 112, 113, 114, 117	681-Y-9049	< 73	1, 17, 22, 95, 104, 105, 109, 111, 112 113, 114, 118
e e e e e e e e e e e e e e e e e e e	657-Y-866	5.33 (1) (2) (2)	, 17, 22, 25, 35, 51, 104, 105, 106, 108, 109, 112, 113, 114, 117	802-M ₋ 23563	< 73	20, 30, 46, 57, 84 & 85, 104, 105, 106, 118
	657-Y-867	A 1 22 X X A 1	17, 22, 25, 51, 57, 79, 88, 100, 104, 105, 106, 109, 112, 113, 114, 117	802-Y-67632	< 73	20, 30, 46, 57, 84 & 85, 104, 105, 106, 118
	657-Y-868	12 July 10 1	[317, 22, 25, 51, 57, 59, 88, 95, 104, 105, 106, 109, 112, 113, 114, 117	802-Y-67640 802-Y-78390	< 73 < 73	20, 30, 46, 57, 89, 104, 105 20, 30, 46, 57, 84 & 85, 104, 105,
	657-Y-869		1,17, 22, 25, 51, 57, 76, 88, 95, 101, 04, 105, 109, 112, 113, 114, 117	818-021	< 73	106, 118 23, 26, 36, 57, 59, 95, 104, 105, 112
		$100 \mathrm{Mz} \times 100 \mathrm{Mz}$, 17, 22, 25, 51, 104, 105, 106, 109, 12, 113, 114, 117	818-026	< 73	1, 23, 25, 26, 27, 57, 59, 73, 95, 104, 105, 112, 113, 116, 118, 119
		Sec. 1864	, 14, 17, 25, 27, 51, 88, 95, 104, 105, 09, 111, 112, 113, 114	818-13170	< 73	25, 27, 51, 57, 105, 116, 118
	657-Y-885	<73 < 11	2, 25, 51, 88, 104, 105, 112, 113, 114 , 17, 22, 25, 35, 57, 59, 88, 95, 104,	823-5151A 823-5151B	< 100 < 100	57, 83, 93, 121 17, 57, 105 57, 83, 93, 121
	657-Y-8110	(05;106;111, 112, 113, 114 ;25;59;88, 95, 101, 103, 104, 105,	823-5152A 823-5152B 823-5153A	< 100 < 100	17, 57, 105
	•. • •	e are out per	06, 109, 113, 117	823-5153A	< 100	57, 83, 93, 121

Section II — Hazardous Ingredients — Continued	823-Y-68396	< 73	17, 25, 27, 35, 44, 45, 57, 59, 85, 88,
Product Flash Point °F Hazardous	823-Y-68414	< 73	93, 95, 105, 106, 116, 117 14, 25, 27, 35, 44, 45, 57, 59, 85, 88,
Code' (Closed Cup) Ingredients 823-51538 < 100 , 17, 57, 105	825-007	< 73	93, 95, 105, 106, 116, 117 7, 20, 22, 23, 25, 51, 57, 93, 95, 104,
823-5214 < 100 (17, 25, 27, 35, 44, 45, 57, 59 83, 85,	825-020	< 73	113, 118
823-A9107 < 100 22,57,105,120			1, 17, 22, 25, 35, 45, 57, 59, 79, 93, 95, 102, 105, 111, 113, 115, 116
823-B9107 < 100 23, 57, 93 823-A9108 < 100 22, 57, 105, 120	825-151	< 100	1, 17, 22, 25, 27, 35, 44, 45, 47, 59, 83, 93, 102, 105, 106, 113, 115, 116,
823-B9108 < 100 23, 57, 93 823-A9109 < 100 57, 120	825-022	< 73	117 1, 17, 25, 35, 45, 57, 60, 79, 93, 102,
823-B9109 < 100 23, 57, 120 823-A9110 < 100 57, 120	825-5008	< 73	105, 115, 116, 118 1, 17, 20, 25, 27, 35, 45, 57, 93, 95,
823-B9110 < 100 23, 57, 120	825-Y-003A	96	105, 111, 113, 116, 118 17, 95, 105, 106, 116, 117
823-H-67727 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 93, 105, 106, 116, 117	825-Y-003A	100	17, 93, 103, 100, 110, 117
823-H-70486 <73 17, 25, 27, 28, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 106, 116, 117	825-Y-003B 825-Y-003B	100 145	93, 104, 114, 116
823-Y-502 <73 17, 25, 27, 28, 29, 35, 44, 45, 57, 59,	825-Y-2288	< 73	1, 16, 17, 25, 27, 35, 44, 45, 57, 59, 71, 85, 88, 93, 105, 106, 113, 116, 117
85, 88, 93, 104, 105, 116, 117 823-Y-5113 <73 17, 25, 27, 35, 44, 45, 52, 57, 59, 85,	825-Y-5002	< 73	1, 17, 24, 25, 27, 35, 47, 57, 59, 93,
93, 95, 105, 106, 116, 117 823-Y-5119A 96 17, 105, 106, 117	825-Y-5004	< 73	95, 105, 111, 113, 116, 118 17, 20, 22, 25, 35, 45, 51, 57, 79, 93,
823-Y-5119A / Mar 100, 13 - 100 A / A / A / A / A / A / A / A / A / A	825-Y-5005	< 73	104, 105, 116, 117 17, 20, 22, 25, 27, 35, 44, 45, 51, 57,
823-Y-5119Bc (1) 1145 (1) 93,7114, 116	825-Y-8031	< 73	59, 79, 93, 104, 105, 106, 116, 117 1, 7, 24, 25, 27, 35, 47, 57, 59, 93, 95,
395 % 116 cm	825-Y-8032	< 73	105, 111, 113, 116, 118 1, 17, 21, 22, 25, 27, 35, 57, 79, 93,
.823-Y-8296 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 104, 105, 106, 116, 117	825-Y-8045	< 73	95, 105, 111, 113, 116, 118 1, 17, 25, 27, 35, 45, 57, 93, 95, 104,
823-Y-8297 : <73	•		105, 113, 118
823-Y-12119 < 73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 106, 116, 117	825-Y-8600	< 73	17, 20, 22, 25, 35, 45, 51, 57, 79, 93, 104, 105, 116, 117
823-Y-12120 < 73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88,	825-Y-8601	<73	17, 20, 22, 25, 27, 35, 44, 45, 51, 57, 59, 79, 93, 104, 105, 106, 116, 117
93, 95, 105, 106, 116, 117 823-Y-23309 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 93,	825-Y-9031	< 73	1, 17, 25, 27, 35, 45, 57, 59, 79, 93, 95, 104, 105, 111, 113, 116
95, 105, 106, 116, 117 823-Y-67632 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 93,	840-5023	< 100	17, 22, 23, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 104, 105, 106, 113, 114,
95, 105, 106, 116, 117 823-Y-67633 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 106, 116, 117	881-Y-017	< 20	116, 117 16, 19, 20, 22, 25, 27, 45, 57, 64, 79,
823-Y-67635 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 93, 95, 205, 116, 117	881-Y-023	< 20	88, 95, 104, 105, 113, 116, 117, 118 16, 19, 25, 27, 44, 45, 49, 64, 79, 88,
823-Y-67636	909-67640	<73	105, 116, 117, 118 16, 17, 22, 57, 59, 80, 88, 104, 105, 13,
823-Y-67637 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 116, 117	909-68446	< 100	114 1, 16, 17, 25, 47, 57, 80, 88, 95, 104, 105, 106, 111, 112, 113, 114, 117
823-Y-67639 < 73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88,	909-68447	< 100	1, 16, 17, 25, 47, 57, 59, 80, 88, 95,
93, 95, 105, 106, 116, 117 823-Y-67640 < 73 17, 25, 27, 35, 44, 45, 57, 59, 88, 93, 105	917-12145	<73	104, 105, 106, 112, 113, 114, 117 20, 22, 25, 27, 47, 52, 57, 88, 95, 99, 104, 105, 106, 114, 117
823-Y-67642 < 73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 106, 116, 117	917-12146	< 73	20, 22, 25, 27, 47, 52, 57, 88, 95, 99, 104, 105, 106, 114, 117
823-Y-67646 < 73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 106, 116, 117	917-23309	< 73	17, 20, 25, 27, 47, 48, 57, 65, 88, 95, 99, 105, 10, 114, 117
823-Y-68002 <73 17, 25, 27, 28, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 116, 117	917-43094	< 73	17, 20, 22, 25, 27, 48, 51, 57, 88, 95, 99, 104, 105, 106, 114, 116, 117
823-Y-68003 <73 17, 25, 27, 38, 35, 44, 45, 57, 59, 85, 93, 95, 105, 116, 117	917-43241	<73	20, 25, 27, 47, 57, 65, 88, 95, 99, 105, 106, 114, 117
823-Y-68288 < 73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 105, 106, 116, 117	917-54108	<73	17, 20, 25, 27, 47, 48, 57, 65, 88, 95, 99, 105, 106, 114, 117
823-Y-68381 <73 17, 25, 27, 35, 44, 45, 57, 59, 85, 88, 93, 95, 104, 105, 106, 116, 117	917-77257	< 73	17, 20, 25, 27, 47, 48, 57, 65, 88, 99, 105, 106, 113, 114, 117

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Section II — Hazardous Ingredients — Continued

Product Code	Flash Point °F (Closed Cup)	Hazardous Ingredients
994-Y-AJ613	< 20	16, 19, 20, 25, 27, 37, 44, 45, 53, 57, 64, 79, 86, 88, 105, 106, 107, 117
994-Y-AB372	< 20	16, 19, 20, 25, 27, 37, 44, 45, 57, 59, 82, 86, 88, 105, 106, 108, 113
995-Y-AJ634	< 20	16, 19, 20, 25, 27, 44, 45, 51, 57, 64, 82, 86, 88, 95, 105, 106, 108, 113, 117
995-Y-AK283	< 20	16, 19, 20, 25, 27, 44, 45, 51, 57, 64, 82, 86, 88, 95, 105, 106, 108, 113
995-Y-AK284	< 20	16, 19, 20, 25, 27, 44, 45, 51, 57, 59, 64, 82, 86, 88, 95, 105, 106, 113
1065-Y-8104	< 73	22, 25, 28, 51, 54, 69, 95, 103, 104, 105, 112, 113, 116, 117, 119
1081-Y-0895	<73	1, 17, 25, 28, 59, 88, 95, 105, 109, 112, 113
1081-Y-43499	< 73	1, 17, 22, 25, 27, 28, 40, 45, 51, 57, 59, 83, 88, 103, 104, 105, 109, 113, 114, 116, 118
1657-Y-768	< 73	1, 17, 22, 25, 51, 59, 88, 95, 104, 105, 112, 113, 114, 117
1657-Y-9057	< 73	17, 22, 25, 27, 32, 34, 51, 88, 104, 105, 109, 112, 113, 114
1657-Y-9067	< 88	1, 17, 22, 25, 51, 57, 59, 88, 95, 104,
1657-Y-9070	< 73	105, 106, 109, 112, 113, 114, 117 22, 25, 51, 73, 88, 104, 105, 109, 112,
1657-Y-9072	< 73	113, 114 1, 17, 22, 25, 27, 51, 88, 95, 101, 104,
1657-Y-9083	< 73	105, 109, 112, 113, 114, 117 1, 17, 22, 25, 32, 34, 51, 88, 104, 105,
1657-Y-9110	< 73	106, 109, 112, 113, 114, 117 1, 17, 22, 25, 51, 88, 95, 104, 105, 106,
1681-9053	78	109, 111, 112, 113, 114, 117 1, 25, 57, 95, 104, 105, 109, 111, 112,
1681-Y-703	<73	113, 114, 116, 118 1, 17, 25, 27, 45, 95, 103, 104, 105, 111, 112, 113, 116

Section III - Physical Data

Evaporation rate: Slower than ether

Solubility in water: Negligible to appreciable, depending on color and quality.

Approximate boiling range: 170°F-400°F

on color and quality.

Vapor density: Heavier than air

Percent volatile by volume:

Gallon weight: 10.5 lbs. typical

57% typical

Section IV --- Fire & Explosion Data

Flash point (Method): Refer to product list in Section II.

Approximate flammable limits: 1-14%.

Extinguishing media: Foam, carbon dioxide, dry chemical.

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data (See Also Section X Notes)

Ingestion: Gastro-intestinal distress. In the unlikely event of ingestion call a physician immediately

In the unlikely event of ingestion, call;a physician immediately and have names of ingredients available of the control of the

Inhalation: May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

If affected by inhalation of vapor or spray mist, remove to great him and nervous artificial resolvation, preferably

If affected by inhalation of vapor or spray mist, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes.
Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.
In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.
In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Section VI - Reactivity Data

Stability: Stable.

Incompatibility (materials to avoid): None reasonabily foreseeable.

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Hazardous decomposition products: (CO, CO₂) smoke, oxides of heavy metals reported in Section X. And the Hazardous polymerization: Will not occur.

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Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled:
Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.

Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists. Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted. Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements:

Protective clothing: Coveralls and neoprene gloves are recommended. Do not reuse coveralls while solvent odor is retained in them.

Eye protection: Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guards or side shields.

Protective creams: May be used for ease of clean up, not for protection.

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating and smoking. Do not store above 120°F.

Section IX: -- Continued and in the section is a continued and
Other precautions: Do not sand, flame cut, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation. នៅនៅនៅលើនៅ ស កា BONNES POR CONTROLLING BUT THE CONTROL DO NOT

Section X — Additional Information ***

Following is a summary of the ingredients listed in Section II and their known hazards. Gaggarawa Gaggara

No.	Name CAS No. (mm Hg @ 20°C)	Exposure Limits
	Soya 8002-43-5 None	None
10.	Amine, None on None on None	None
ing salah sa	trade to the market to the second secret when the state of the second se	

May cause allergic skin rash, Itching, swelling. Causes severe eye irritation.

11.	Curing. agent	None	None	None
12.	Resinous	61788-76-9		None
13.	paraffin 2. 2' Dihv-	// None⊞s		None

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1000 ppm-A

200 ppm-0

May cause allergic skin rash, Itching, swelling. 15. Denatured None, 3. 3.

methoxybenzo-

phenone

ethyl

ethyl alcohol	1000 ppm-0
(5% Acetone) Company with the Company of the compan	•
16 Butyl. 10123-86-4 part and 8	-150 ppm-A
and another section in the section to the second of the se	150 nnm-0

Extremely high concentrations have caused blood changes and weakness in laboratory animals

17. N-butyl, 71-36-3 4 alcohol.	50 ppm-A ceiling
otics, angles in in that s ervices age continued by the electric. The continue are producting the partial following sites in the	ioo ppiii o
children in eld villar), dideolok ý ota teknikovici	25 ppm-D 50 ppm-D,
The graph of the first and sold of the first term of the control of the first term of the control of the contro	15 min.
May cause moderate eye burning.	
18. Linseed 8001-26-1 None	10 ppm mg/ m³-A
refined 19. Acetone 67-64-1 167 186	750 ppm-A 1000 ppm-0
20.: Methyl : 78-93-3 t Laster 95	200 ppm-A

High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone has been demonstrated to potentiate (i.e., shorten the time of onset) the peripheral neuropathy; caused by:either: N-Hexane; or: Methyl N-butyl ketone. MEK by itself has not been demonstrated to cause peripheral neuropathy. And the work was a both

21.	Diacetone	123-42-2	- 1	50 ppm-A
	alcohol		•	50 ppm-0
22.	Methyl	67-56-1	125	200 ppm-A skin
	alcohol			200 ppm-0
				200 ppm-D skin
				100 ppm-D skin

Excessive human exposure to methanol may lead to: fatigue, headache, anesthetic, neurologic effects, and visual difficulties including blindness or death. Can be absorbed through the skin in harmful amounts. Recurrent overexposure may result in liver and kidney injury.

23.	Methyl	108-10-1	15	50 ppm-A
	isobutyl			150 ppm-0
	ketone			• •

May cause abnormal kidney function.

24.	4-Methyl	108-11-2	Unknown	25 ppm-A skin
	-2 pentanol	•		25 ppm-0

Male rats exposed to very high airborne levels showed an increase in kidney weights. These effects were not seen in male rats exposed to lower concentrations, or in female rats at the same level.

25.	Toluene	108-88-3	29	100 ppm-A
				200 ppm-0

Tests in animals have shown liver, bone marrow and kidney effects.

26.	Cyclo-	108-94-1	. 2	25 ppm-A
	hexanone		•	50 ppm-0

Can be absorbed through the skin in harmful amounts. Recurrent overexposure may result in liver and kidney injury. Prolonged skin contact may cause chemical burns. Liquid splashes in the eye may result in chemical burns.

27.	Isopropyl	67-63-0	44	400 ppm-A
	alcohol			400 ppm-0

May cause eye irritation with discomfort, tearing, or blurred visión. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. High oral doses have caused anemia in laboratory animals.

28.	2-Ethoxy-	110-80-5	4	5 ppm-A skin
	ethanol			200 ppm-0 skin
	•			10 ppm-D skin

Can be absorbed through the skin in harmful amounts. Repeated exposure to high concentrations may cause injury to the bone marrow and blood cells, kidney, liver and testes. Exposure of female laboratory animals has resulted in increased fetal mortality, delayed fetal development and birth defects.

29.	2-Ethoxy-	111-15-9	1.7	5 ppm-A skin
	ethyl			200 ppm-0 skin
	acetate			10 pom-D skin

Repeated exposure to high concentrations may cause injury to the bone marrow and blood cells, kidney, liver and testes. Exposure of female laboratory animals has resulted in increased fetal mortality, delayed fetal development and birth defects.

30.	Primary 628-63-7	4.5	100 ppm-A
	amyl acetate		.* *
31.	Methyl-N 110-43-0	2	50 ppm-A
	amyl ketone		100 ppm-0

Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights.

Section X - Continued

Ingredient No.	Name	CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits
32.	Dibutyl phthalate	84-74-2	None	5 mg³/m³-D
33.	Bis (tri- N-butyl tin) oxide	56-35-9	None	0.1 mg/m ³ -A

Can be absorbed through the skin in harmful amounts. Liquid splashes in the eye may result in chemical burns. Prolonged skin contact may cause chemical burns.

35. Propylene 107-98-2 11 100 ppm-A glycol methyl ether

May cause eye irritation with discomfort, tearing, or blurred vision. May cause temporary upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. Can be absorbed through the skin in harmful amounts.

36.	Dioctyl phthalate	117-81-7	None	5 mg/m³-A
37.	Mixed diabasic	None	14	10 mg/m³-D
	esters			

May cause eye irritation with discomfort, tearing, or blurred vision. High airborne levels in rats have shown mild injury to the olfactory region of the nose.

38. Trixy- 68952-33-0 None None lenyl phosphate

Has produced delayed neurotoxicity via oral and dermal routes in studies on the hen.

3 9.	Chlori- nated paraffin	None	None	None
40.	2-Butoxy- ethanol	111-76-2	. 1	25 ppm-A skin 50 ppm-O skin 10 ppm-D skin

Can be absorbed through the skin in harmful amounts. May cause injury to the kidneys, liver, blood and/or bone marrow. Repeated overexposure may result in damage to the blood. Eye contact may cause corneal injury.

42.	Linseed oil	8001-26-1	None	5 mg/m³-D
43.	Terpene hydrocarbon	9005-90-7	Unknown	None
44.	Ethyl acetate	141-78-6	74	400 ppm-A 400 ppm-0

Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs.

45. Propylene 108-65-6 3.8 None glycol monomethy! ether acetate

Can be absorbed through the skin in harmful amounts. May cause injury to the kidneys, liver, blood and/or bone marrow. Repeated overexposure may result in damage to the blood. Eye contact may cause corneal injury. May cause moderate eye burning. Can be absorbed through the skin in harmful amounts.

46.	Diiso- decyl phthalate	· NOY (0 None	miself h	None	ख1 <u>.</u> १
(47.)	Ethylene glycol monobutyl ether acetate	112-07-2	0.3	20 p		in
48.	Vinyl oxzazoline ester of linseed oil	None	None		None	od)

May cause eye irritation with discomfort, tearing, or blurred vision.

49.	2, 4 Pentane 123-54-6 Unknown Wholl None
	dione. At away a
51.	Water 7732-18-5 20 None
53.	Water 7732-18-5 20 None Ethylene 107-21-1 0.1 50 ppm-A glycol celling 10 mg/m³-0
-	glycol
	10 mg/m³-0

Has been shown to produce dose related teratogenic effects in rats and mice when given orally in high concentrations.

67. Xylene 1330-20-7. 25 100 ppm-A 100 ppm-O

High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts.

59.	Aromatic 64742-95-6 10 50 ppm-D	
	hydrocarbon () A continue of the land gape () A fine	
60.	Aromatic 64742-94-5 10 648 100 ppm-D	
	hydrocarbon was a grant with a specific control of the second of the sec	
64.	Butyl benzyl 85-68-7 None 5 mg/m³-D ohthalate	

Extremely high oral doses have caused tissue changes in the liver and testes of laboratory animals. Extremely high vapor aerosol doses have caused atrophy of the spleen and reproductive organs. Cancer/hazard based on tests with

borator	y animais. C	verexposure may create cancer risk.
<i>(</i> 65. <i>)</i>	Diethy-	112-70-2 0.1 20 ppm-D
	lene glycol	THE COURSE OF STREET STREET, STREET
	monobutyl	
	ether acetate	the Salara Service Segregation of the co
66.	Polymer-	None None part 10 mg/m³-A
	ized linseed	ASSET TO A CARREST TO STATE OF THE STATE OF
	oil	
67.	Methyl	107-87-9 Unknown 200 ppm-A
• • • •	N-propyl	200 ppm-A
	ketone	W. W. W. Control of the Control of t
70.	Aluminum	58425-86-8 None 10 mg/m³-A
	silicate,	15 mg/m³-0
	hydrated	
71.	Basic zinc	None None None
, ,,	molybdate	STATE STREET THAT SHAPE SHOW
72.		
12.	Copper chromite	68186-91-4 5 mg/m³-A
	black spinel	
	niack shille	化二十二二烷 化二二烷 法制度 医二十二氏病 化二二二烷

Overexposure may cause eye, nose and throat irritation. Repeated or prolonged contact may cause skin irritation with discomfort and dermatitis.

Section X — Continued

Ingredient No.	Name	CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits
101.	Lead chromate	18454-12-1	None .	150 ug/m³-A as lead (Pb) 50 ug/m³-O as lead (Pb) 50 ug/m³-A as chromium (Cr) 0.1 mg/m³-O as chromium (Cr)

Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA lead standard 29CFR1910.1025. Is an IARC, NTP or OSHA carcinogen.

102. Mica 12001-26-2 None 0.3 mg/m³-A respirable 0.3 mg/m³-O respirable

Repeated and prolonged overexposure may lead to chronic lung disease.

103. Manganese None 5 mg/m³-A ceiling 5 mg/m³-O ceiling

Contact may cause skin irritation with discomfort or rash.

104)	Non- hazardous inorganic pigment	None	None	None
(05)	Non- hazardous polymer	None	None	None
106.	Non- hazardous organic pigment	None	None	None
107.	Nickel, Antimony, Titanium yellow pigment	8007-18-9	None	0.5 mg/m³-A SB 0.5 mg/m³-0 SB

Antimony and nickel are incorporated innto the crystal structure of titanium dloxide. As such they are chemically and biologically inert.

108.	Fatty acids	None	None	None
109.	Lead naphthenate	7439-92-1	None	150 ug/m³-A, as lead (Pb) 50 ug/m³-O,

Overexposure to lead may cause adverse effects to the blood forming, nervous, urlnary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA lead standard 29CFR1910.1025. Can be absorbed through the skin in harmful amounts.

110.	Poly- 26352-16-9 siloxanes	None	None None
111.	Quartz- 14808-60-7	None	0.1 mg/m³-A, respirable 0.1 mg/m³-0
	crystalline glf mm) it	eass on The Control of	0.1 mg/m³-0 respirable

Repeated overexposure to crytalline silica may lead to typical x-ray changes and chronic lung disease.

112. VM & P 64742-89-8 None 300 ppm-A naphtha 100 ppm-D

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

13.) Medium 64742-88-7 None 100 ppm-A 500 ppm-O spirits 100 ppm-D

Laboratory studies with rats have shown that petroleum distillates cause kldney damage and kldney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kldney damages.

Heavy 64742-48-9 None 100 ppm-D naphtha

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

115. Strontium 7789-06-2 None 50 ug/m³-A as chromium (Cr)
0.1 mg/m³-O as chromium (Cr)

May cause eye irritation with discomfort, tearing, or blurred vision. Health studies have shown that strontium chromate pigment manufacturing may be associated with an increased risk of lung cancer. Is an IARC NTP or OSHA carcinogen.

	arous 148 nesium	07-96-6	None	2 mg/m³-A respirable
sil	licate			no asbestos
	•			5 mg/m ³ -0
•				no asbestos
	•			2 mg/m ³ -D
				respirable,
				no asbestos
(117/ Tita	anium 134	63-67-7	None	10 mg/m ³ -A
die	nvida	The Art of the Art	7.1	

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rats' lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace.

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Section X -- Continued

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Ingredient No. Name	CAS No. (m	Vapor Pressure Im Hg @ 20°C)	Exposure Limits
118. Zinc	13530-65-9	None	5 ug/m³-A as chromium
to separate in an arch	कृतिसीति करित्तात । स्वयंत्रीविक्ता स्ट	id (M. CH. COS). Mit d'Albert (C. Ch.)	/Cr\
TA ragg titlik Litter gid (101	ans. W	的情况的"人"和" 人","为"的	as chromium

May cause eye irritation with discomfort, tearing, or blurred vision. Health studies have shown that zinc chromate pigment manufacturing may be associated with an increased risk of lung cancer, Islan IARC, NTP or OSHA carcinogen.

Zinc oxide	1314-13-2	None	10 mg/m³-A
oxide 120. Coal tar	68187-57-5	2	0.2 mg/m³-A 0.2 mg/m³-0

Repeated exposure to high concentrations may cause injury to the bone marrow and blood cells, kidney, liver and testes. Exposure of female laboratory animals has resulted in increased

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 pásses vy gravest průmodáb říhví apitot v Seja mach postsinie tritt pyvate mest sodretmesonan pást w indotració sat yria psimárch Appostant (1990 vz WM, DWI na cisa)

to regard to the constitution of the properties of which the constitution of the const

fetal mortality, delayed fetal development and birth defects. Repeated and/or prolonged overexposure to high concentrations may result in possible cardiovascular collapse. This product contains coal tar pitch. Volume 35 of the IARC monographs states that there is sufficient evidence that coal tar pitches are carcinogenic in humans. Additionally, there is sufficient evidence that occupational exposure to coal tars as it occurs during the destructive distillation of coal Is casually associated with the occurrence of skin cancers in humans. Persons with a history of liver, kidney, skin or respiratory disease of exposure to materials harmful to these systems are at a greater than normal risk of developing adverse health effects when working with this product.

121. Isobutanol 1330-20-7 8 50 ppm-A 100 ppm-O

May cause moderate eye burning.

Hazardous Ingredient Exposure Key: A = ACGIH, S = Supplier, D = Du Pont, O = OSHA

Notice: The data in this material safety data sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

Product Manager Maintenance Finishes

Section VIII - Special Protection Information

Respiratory: Do not breathe vapors or mists.

Wear an appropriate, properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Coveralls and neoprene gloves are recommended. Do not reuse coveralls while solvent odor is retained in them.

Eye protection: Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are worn, splash guards or side shields should be included.

Protective creams: May be used for ease of clean-up, not for protection.

Section IX - Special Precautions

Precautions to be taken in handling and storing. Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating and smoking. Do not store above 120°F.

Section X — Additional information

Following is a summary of the ingredients in Section II and their known hazards.

tade a least the proposition in action Vapor to the state of the better the state of the state o	Exposure Limits 150 ppm-A
porpular partial field and the grant field in the	
Extremely high concentrations have caused blo and weakness in laboratory animals.	
J-22-31 N-Butyl alcohol 71-36-3 (1990) v-14 (1990) v-1	50 ppm-A celling

2./ N-Butyl alconol / 1-36-3	ou ppm-A
र इस भी निर्मानी भी स्था है। देखी हुन समी अपन्य के मिला कर	celling
and the control of the state of the control of the	· 100 ppm-0
	25 ppm-D
The same of the artist of the same of the	50 ppm-D
austriograph a physician in the control of the cont	15 mins.

High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone has been demonstrated to potentiate (i.e., shorten the time of onset) the peripheral neuropathy caused by either N-hexane or Methyl N-butyl ketone. MEK by Itself has not been demonstrated to cause peripheral neuropathy.

5.45 (20) Diacetone of 123-42-216-4776 (1664-5) of the control of	50 ppm-A 50 ppm-0
6. Methyl isoamyl 110-12-3 4.5	50 ppm-A

Extremely high oral doses in laboratory animals have shown weight changes in various organs such as the liver, kidney and adrenal gland. In addition liver injury was observed.

7.	Methyl alcohol 67-56-1	125	200 ppm-A
			skin
			200 ppm-0
			200 ppm-D
			8 Hr TWA, skin
	•		100 ppm-D
			12 Hr TWΛ,

skin

Excessive human exposure to methanol may lead to: Fatigue, headache, anaesthetic, neurologic effects, and visual difficulties including blindness or death. Can be absorbed through the skin in harmful amounts. Pecurrent overexposure may result in liver and kidney injury.

8.	B. Methyl isobutýl 108-10-1 ketone		15	50 ppm-A 150 ppm-0
May	cause abnorm	al kidney funct	tion.	
9.	Toluene	108-88-3	29	100 ppm-A 200 ppm-0

Tests in animals have shown liver, bone marrow and kidney effects.

10.	Isopropy! alcohol	67-63-0	٠	44	400 ppm-A 400 ppm-O

May cause eye irritation with discomfort, tearing, or blurred vision. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. High oral doses have caused anemia in laboratory animals.

11.	2-Ethoxyethyl	111-15-9	17	5 ppm-A
	acetate			skin
				200 ppm-0
	•			skin
				10 ppm-D
	•			skin

Repeated exposure to high concentrations may cause injury to the bone marrow and blood cells, kidney, liver and testes. Exposure of female laboratory animals has resulted in increased fetal mortality, delayed fetal development and birth defects.

12.	Mixed dibasic	None	14	10mg/m ³ -D
	esters			,

May cause eye irritation with discomfort, tearing, or blurred vision. High airborne levels in rats have shown mild injury to the olfactory region of the nose.

13.	Propylene	108-65-6	3.8	None
	glycol			
	monomethyl	•		
	ether acetate		•	

Can be absorbed through the skin in harmful amounts. May cause moderate eye burning.

14.	Ethylene glycol 112-07-2	0.3	25 ppm-S
	monobutyl		20 ppm-D
	other acotate		ساران

Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function.

Section X — Additional Information — Continued

Ingredient No.	Name	CAS NO.	Exposure (mm Hg @ 20°C)	Exposure Limits
15.	Xylene	1330-20-7		100 ppm-A

High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts.

16.	Aromatic hydrocarbon	64742-95-6	10	50 ppm-D
17.	Aromatic hydrocarbon	64742-94-5	10	100 ppm-D
18.	VM & P Naphtha	64742-89-8	45	300 ppm-A 100 ppm-D

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

19.	Medium	64742-88-7	45	100 ppm-A
	mineral spirits	3		500 ppm-0
				100 ppm-D

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

Exposure Limit Key:

A = ACGIH D = DU PONT O = OSHA S = SUPPLIER

Notice: The data in this Material Safety Data Sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

Product Manager Maintenance Finishes



MATERIAL SAFETY DATA SHEET

MAINTENANCE FINISHES November 18, 1985

DRY BULK MATERIALS

THE CONTROL OF THE PRODUCTS SUCH AS GANICINO ZINC DUST, NON-SLIP ADDITIVES, ETC.)

Section I

Manufacturer

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E. I. du Pont de Nemours & Company, Inc. Finishes & Fabricated Products Department

Section Section 1995 Proces

A CONTRACTOR IN

Wilmington, DE 19898

Telephone: Product information (800) 441-7515

Medical emergency (800) 441-3637

Transportation emergency (800) 424-9300

(CHEMTREC)

Product: Dry bulk paint additives

Section II — Hazardous Ingredient Listing

This section lists all products sold in this classification and the hazardous ingredients in each. For specific information regarding the hazard(s) associated with each ingredient, refer to Section X. If you have a material not specifically designated below, check the label for the list of ingredients and then refer to Section X.

Product Code	Hazardous Ingredients
347-Y-B910	1
347-Y-B912	1
347-Y-B931	1
347-Y-B937	1, 2, 3
347-Y-B971	1, 4
347-Y-B973	1
VM-5596	5

Section III - Physical Data

Evaporation rate: Not applicable
Solubility in water: None
Sproximate boiling range:
Not applicable
Not applicable
Sproximate boiling range:
Not applicable
Gallon weight: 56 lbs. typical

Vapor density: Not applicable
Percent volatile by weight: 0

Section IV - Fire & Explosion Data

Flash point (Method): Not applicable.

Extinguishing media: Foam, carbon dioxide, dry chemical. Avoid water for zinc containing products.

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended.

Unusual fire and explosion hazards: Zinc dust reacts with water to produce hydrogen. Bulk zinc dust, when damp, may ignite spontaneously in air. When dampened in a confined space, an explosive concentration of hydrogen may form. For other dry organic materials, dust clouds can form explosive mixtures in air.

Section V — Health Hazard Data

Inhalation: Overexposure may cause nose and throat irritation. Zinc oxide fumes may result from combustion of zinc dust. Excessive inhalation of these fumes may produce symptoms known as metal fever or "Zinc Shakes", an

acute, self-limiting condition without recognized complications or after affects. Symptoms usually disappear within 24 hours. These materials are combined with other paint products. Read the appropriate MSDS for the product to which this will be added.

If affected by inhalation of vapor or spray mist, remove to fresh air. If not breathing, give artificial respiration, preferrably mouth to mouth. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause eye irritation with discomfort, tearing or blurred vision.

In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Section VI - Reactivity Data

Stability: Stable

Incompatibility (materials to avoid): Zinc — water, acids, alkalis.

All others — none reasonably foreseeable.

Hazardous decomposition products: CO, CO₂, smoke, oxides of heavy metals reported in Section X.

Hazardous polymerization: Will not occur.

Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Prohibit smoking. Avoid sparks. Remove sources of ignition. Avoid dusting.

Waste Disposal Method: Dispose in dry closed containers in accordance with federal, state and local requirements.

Section VIII - Special Precaution Information

Respiratory: Do not breathe fumes or dusts. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Coveralls and gloves are recommended.

Eye protection: Goggles are preferred to prevent eye irritation.

If safety glasses are substituted, include splash guards or side shields.

Protective creams: May be used for ease of clean up, not for protection.

Section IX — Special Precautions

Precautions to be taken in handling and storing. Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating and smoking. Do not store above 120°F.

Other precautions: Do not sand, flame cut, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation.

Section X - Additional Information

Following is a summary of the ingredients listed in Section II and their known hazards.

Ingredient No.	Name	CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits
1.	Zinc Dust	7440-66-6	None	None
. 2.	Iron Oxide	1309-37-1	None	None
3.	Mica	12001-26-2	None	3 mg/m³-A respirable 3 mg/m³-0 respirable

Repeated and prolonged overexposure may lead to chronic ung disease.

4.	Red lead 1314-41-6 None	150 μg/m³-A as lead (Pb)
		. as lead (PU)
		50 μg/m³-0
		as lead (Pb)

Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary and reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue See OSHA Lead Standard 29CFR1910.1025.

5.	Crushed	None None 5 mg/m³-A
	walnut	respirable
	shells	and the season of the form of the

Exposure Limit Key: A = ACGIH O(=) OSHA

Notice: The data in this Material Saféty! Data Sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

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Product Manager Maintenance Finishes

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MATERIAL SAFETY DATA SHEET **PAINT ADDITIVES**



MAINTENANCE FINISHES November 18, 1985

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Section I

Manufacturer

E. I. du Pont de Nemours & Company, Inc. Finishes & Fabricated Products Department

Wilmington, DE 19898

Telephone: Product information (800) 441-7515 Medical emergency (800) 441-3637 Transportation emergency (800) 424-9300

(CHEMTREC)

Product: Miscellaneous paint: additives. with a car despital to be

Section II — Hazardous Ingredient Listing

This section lists all products sold in this classification and the hazardous ingredients in each. For specific information regarding the hazard(s) associated with each ingredient, refer to Section X. If you have a material not specifically designated below, check the label for the list of ingredients and then refer to Section X.

	Flash Point °F (Closed Cup)	
69CM	(Closed Cup)	12, 13, 16·
81CM	rizw 138 73e ni	411; 12, 13
82CM 45 16	ುಗಳ , 138 / ಆಗಿಸು	12,13,14
	ମଧ୍ୟ ଲୋ 38 ୬୭ ଅନ୍ୟ	
84CM	138	12, 13
89CM		12,13
99CM	138	
167CM	138 138	12, 13, 17
171CM	138 ^{'''''}	13, 17
172CM	,,,,, : 138	_{.:} 12, 13, 15
VD-1287	ِنَّ : 100 < اَنْ اَنْ اَنْ اَنْ اَنْ اَنْ اَنْ اَنْ	4, 9, 11
VD-E-56433	> 100	4, 7, 9, 8, 18
	erotema 94 ver envo	
	∂∌ખ <′73 ખીલ	
VM-8195	< 100	4, 5, 6, 10

Section III — Physical Data

Evaporation rate: Slower than

Solubility in water: Slight -

ether.

Moderate

Approximate boiling range:

Vapor density: Heavier

160-400°F

than air

Percent volatile by volume:

Gallon weight: 10.5 lbs.

65% typical

Section IV — Fire & Explosion Data

Approximate flammable limits: 1-14%.

Extinguishing media: Foam, carbon dioxide, dry chemical. Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire and explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data (See also Section X)

Ingestion: Gastro-intestinal distress.

In the unlikely event of Ingestion, call a physician immediately and have names of ingredients available.

Inhalation: Overexposure may cause nose and throat irritation. May cause central nervous system effects such as dizziness, headache, nausea, staggering gait, confusion and unconsciousness. Reports have associated repeated িন্ and prolonged overexposure to solvents with permanent has brain and nervous system damage.

If affected by inhalation of vapor or spray mist, remove: to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause eye irritation or burning of the in eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. ાંત In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: Stable

Incompatibility (materials to avoid): none reasonably foreseeable.

Hazardous decomposition products: CO, CO2, smoke, oxides of heavy metals reported in Section X. Hazardous polymerization: Will not occur.

Section VII — Spill or Leak Procedures

MY. Steps to be taken in case material is released or spilled: on Ventilate area. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbent.

Waste disposal method: Do not allow material to contaminate ground water systems. Send to hazardous waste water treatment or incinerate absorbed material in accordance 33 with federal, state and local requirements. Do not incinerate? in closed containers.

Section VIII — Special Precaution Information

Respiratory: Do not breathe vapors or mists. Wear a properly lest fitted vapor/particulate respirator approved by NIOSH/ MSHA (TC-23C) for use with paints during application and 1/2 until all vapors and spray mist are exhausted. Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Gloves and coveralls are recommended. Eye protection: Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are worn, splash guards or side shields should be included.

Protective creams: May be used for ease of clean-up, not for protection.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating and smoking. Do not store above 120°F.

Other precautions: Do not sand, flame cut, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation.

Section X - Additional Information

Following is a summary of the ingredients listed in Section II and their known hazards.

ingredient No.	Name	CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits
1.	Ethyl acetate	141-78-6	74	400 ppm-A 400 ppm-0

Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs.

2. Dibutyl 77-58-7 None 0.1 mg/m³-A tin dilaurate as tin (Sn) 0.1 mg/m³-O as tin (Sn)

Causes eye corrosion and permanent injury. Contact may cause skin burns. Can be absorbed through the skin in harmful amounts.

3.	Pentan- edione	123-54-6	7	None
4.	Medium mineral spirits	64742-88-7	45	100 ppm-A 500 ppm-0 100 ppm-D
	opiiiio			

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

5. n, n 112-18-5 dimethyl dodecyl

Contact may cause skin irritation with discomfort or rash. Prolonged skin contact may cause chemical burns. Causes eye corrosion and permanent injury.

6. Xylene 1330-20-7 25 100 ppm-A 100 ppm-0

High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts.

7. Methyl 96-29-7 None ethyl ketoxime

Inhibits alcohol metabolism.

Cobalt 50 ug/m³-A naphthenate 0.1 mg/m^3-0 Contact may cause skin irritation with discomfort or rash. Manganese None None 5 mg/m³-0 napthenate $5 \, \text{mg/m}^3 - 0$ Contact may cause skin irritation with discomfort or rash. 10. Non-None None None hazardous West 20 arangieray polymer None 150 ug/m³-A 11 Lead naphthenate Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, and anemia, disturbance of sleep and fatigue. See OSHA Lead Standard 29CFR1910.1025. Can be absorbed through the skin. in harmful amounts. 12. Butoxy-111-76-2: 4: 4: 4: 0.6 + 15: 6: 25 ppm-A; skin and the religious and the second ethanol

Can be absorbed through the skin in harmful amounts. May cause injury to the kidneys, liver, blood and/or bone marrow. Repeated overexposure may result in damage to the blood. Eye contact may cause corneal injury.

13. 140°F 64742-47-8 3 45 3 3 45 3 100 ppm-A flash solvent

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors.

These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

14. Chromate 7440-47-3 (None) 5 mg/m³-A oxide (Cr) (Cr)

15. Titanium 13463-67-7 None 10 mg/m³-A dioxide

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rats lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace.

16. Iron Oxide

17. Morpho- 110-91-8 None 20 ppm-A line

Causes severe eye irritation:

18. Aromatic 64742-95-6

18. Aromatic 64742-95-6 910 50 ppm-D hydrocarbon

Exposure Limit Key:

A = ACGIH O = OSHA D = Du Pont S = Supplier

Notice: The data in this Material Safety Data Sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

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MATERIAL SAFETY DATA SHEET

WATER BASED FINISHES

MAINTENANCE FINISHES November 18, 1985

Section I

Manufacturer .

E. I. du Pont de Nemours & Company, Inc. Finishes & Fabricated Products Department

Wilmington, DE 19898 programme

Telephone: Product information (800) 441-7515

Medical emergency (800) 441-3637

Transportation emergency (800) 424-9300
(CHEMTREC)

Product: Latex Paints.

D.O.T. Hazard Class: Not regulated.

Section II - Hazardous Ingredient Listing

This section lists all Du Pont Maintenance and Transportation Finishes waterbased paints and the hazardous ingredients in each. For specific information regarding the hazard(s) associated with each ingredient, refer to Section X. If you have a Du Pont Maintenance and Transportation Finishes water based paint not specifically designated below, check the label for the list of ingredients and then refer to Section X.

Product Code (Horal Hazardous Ingredients

	nazaruous myreumins
310-Y-204 (53C)	1 . 2 . 3 . 6 . 14 . 21
310-7-293 (19610)	1, 2, 3, 6, 14, 15 1, 2, 3, 6, 14, 15
310-V-204 (1062C)	1 2 3 6 14 15
210 V 206 (1064C)	1, 2, 6, 14, 15
010 7 462	1, 2, 3, 6, 14, 21
310-1-403	1, 2, 3, 0, 14, 21
310-Y-602 (2316)	1, 2, 3, 6, 14, 21
310-4-603 (2490)	1, 2, 3, 6, 14, 21
310-Y-604 (13000)	1, 2, 3, 6, 14, 21
310-Y-605 (1301C)	1, 2, 3, 6, 14, 21
310-Y-606 (1302C)	1, 2, 3, 6, 14, 21
310-Y-607 (1305C)	1, 2, 3, 6, 14, 21
310-Y-462 310-Y-663 310-Y-602 (2310) 310-Y-603 (2490) 310-Y-605 (13010) 310-Y-606 (13020) 310-Y-607 (13050) 310-Y-608 (13070) 310-Y-615 (13180) 310-Y-622 (13230)	1, 2, 3, 6, 8, 14
310-Y-615 (1318C)	1, 2, 6, 8, 14
310-Y-5101, 22A 5 210 1 2	1, 2, 3, 6, 14
310-Y-13059	1, 2, 3, 6, 8, 14
310-Y-13059 311-Y-802 (1861C)	1, 3, 4, 5, 6, 7
311-Y-802 (18610) 311-Y-805 (1864C)	1, 4, 5, 8
315-Y-502 (1801C) 1	1, 6, 8, 9, 10, 11
315-Y-539 (1809C)	1, 6, 8, 9, 12
311-Y-802 (1861C) 311-Y-805 (1864C) 315-Y-502 (1801C) 315-Y-539 (1809C) 315-Y-540	•
315-Y-540 315-Y-543 (1800C) 347-Y-A971 347-Y-A973	1, 3, 6, 9, 13
347-Y-A971	1, 22
347-Y-A973	1, 23
389Y-172	1, 6, 12, 18
389-Y-187 Wallet Share	1, 6, 18, 19
389-Y-268	1. 2. 3. 6. 19
389-Y-370 (1941C) 389-Y-371 (1942C)	1, 3, 6, 9
389-Y-371 (1942C)	1. 3. 5. 6. 9
389-Y-372 (1944C)	1. 3. 5. 6. 9
389-Y-372 (1944C) 392-Y-745 (1931C) 392-Y-746 (1932C) 392-Y-901 (2360C)	1. 2. 3. 6. 15. 16. 17
392-Y-746 (1932C)	1, 2, 3, 6, 16
392-Y-901 (2360C)	1, 3, 6, 19, 20
392-Y-902 (2361C)	1 3 6 19 20
392-Y-911 (2379C) - 111 (2379C)	1 3 6 19 20
002-1-011(50100).11 -11	1,0,0,10,20

392-Y-929 (2386C) 394-Y-260	1, 3, 6, 19, 20
394-Y-801 (1699C)	1, 3, 5, 6, 9
394-Y-802 (1661C)	1, 3, 5, 6, 9, 11
394-Y-811 (1679C)	1, 3, 5, 6, 9
394-Y-818 (1688C)	1, 3, 5, 6, 9
394-Y-830 (1629C)	1, 3, 5, 6, 9
394-Y-838 (1603C)	1, 3, 5, 6, 9
830-Y-5011	1, 3, 6, 12, 17, 19
830-Y-5014	1, 3, 6, 8, 11, 17, 19

Section III - Physical Data

Evaporation rate: Slower than

Solubility in water: Complete :

ether

Approximate boiling range:

Vapor density: Heavier than air

212-230°F

Percent volatile by volume:

Gallon weight: 10 lbs. typical

70% typical

Section IV — Fire and Explosion Data

Flash point (Method): Above 200°F, will not support combustion.

Extinguishing media: Not applicable.

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Section V — Health Hazard Data (See also Section X)

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.

Inhalation: Normally not a hazard unless sprayed, then primarily a nuisance dust. May contain small amounts of solvent (see sections II & X). If affected by inhalation of vapor or spray mist, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes.

Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.

Section VI - Reactivity Data

Stability: Stable.

Incompatibility (materials to avoid): None reasonably foreseeable.

Hazardous polymerization: Will not occur.

Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Ventilate area. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.

Section VII — Spill or Leak Procedures — Continued

Waste disposal method: Do not allow material to contaminate ground water systems. Send to hazardous waste water treatment or inclinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Precaution Information

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Respiratory: For spray in all but extremely confined spaces, wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted. Follow respirator manufacturer's directions for respirator use. For brush and roll application, respiratory protection is not normally required.

Ventilation: Provide sufficient ventilation in volume and pattern to keep below applicable OSHA requirements.

Protective clothing: Gloves and coveralls are recommended.
Eye protection: Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are worn, splash guards or side shields should be included.

Protective creams: May be used for ease of clean-up, not for protection.

Section IX - Special Precautions (1997)

Precautions to be taken in handling and storing: Observe label precautions. Wash thoroughly after handling and before eating and smoking.

Other precautions: Do not sand, flame cut, braze or weld dry

Other precautions: Do not sand, flame cut, braze or weld dry coating without NIOSH/MSHA approved respirator or appropriate ventilation.

Section X — Additional Information

Following is a summary of the ingredients listed in Section II and their known hazards and include the house of the section II

Addition stratisment to sever

- Charles Vapor Vapor	
Ingredient Pressure No. Name CAS No. (mm Hg) @ 20°C)	Exposure Limits
1. 19-Me Water p. p77/32-18-5 (and the 18 cm as	None
120 2 and a Hydrous 3 14807-96-6 (2000) None of the	2 mg/m ³ -A
magnesiumာမှုမှုနှင့် မောက်လ ညည်းမြောင်းမေးမ	no asbestos
 and self-stafficate of no house one service years. 	5 mg/m ³ -0
re is nactica social ballions balgat brigaines in	no asbestos
in the trial of the first trial of the first	2 mg/m³-D
morning to adopting the stand phyllide marge before,	no asbestos

Repeated and prolonged overexposure to talc may lead to typical x ray changes and chronic lung disease.

3. Titanium 13463-67-7 None 10 mg/m³-A

In a lifetime Inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of their titanium dioxide concentrations in the rats' lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace.

14.5 on the Silicone of the None income of the Silicone in the resin of the consected Angula through the second to be

5.	Aluminum silicate slurry	58425-86-8	18	2 mg/m³-A no asbestos 5 mg/m³-0
		•		no asbestos
				2 mg/m³-D
		•		no asbestos

Repeated and prolonged overexposure to talc may lead to typical x ray changes and chronic lung disease.

6.	Non- hazardous polymer	None	None	None
7.	Amorphous silica	7631-86-9	None	10 mg/m³-A 15 mg/m³-0 6 mg/m-D
8.	lron oxide	1309-37-1	None	None
9.	Propylene alvcol	57-55-6	0.1	10 mg/m³-D

High doses in laboratory animals have shown non specific effects such as irritation, weight loss, and moderate blood changes.

10. Ammonia 1336-21-6 755 25 ppm-A 50 ppm-0

Contact may cause skin burns. Causes eye corrosion and permanent injury. May cause temporary upper respiratory and/ or lung irritation with cough, difficulty breathing, or shortness of breath.

11.	Non- hazardous organic pigment	None	None	None
12.	Carbon black	1333-86-4	None	3.5 mg/m ³ -A 3.5 mg/m ³ -O
13.	Methyl 1-(butyl- carbamoyl) 2-benzi- midazole	17804-35-2	None	5 mg/m³-D

Benomyl has caused liver tumors in mice in a lifetime feeding study. This effect was not seen in rats and dogs.

14.	Mica	12001-26-2	None	3 mg/m³-A 3 mg/m³-0
15.	Sodium poly- carboxylate	None	None	None
16.	Medium mineral spirits	64742-88-7	45	100 ppm-D

Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

17. Ethylene 107-21-1 0.1 50 ppm-A ceiling glycol 10 mg/m³-0

Has been shown to produce dose related teratogenic effects in rats and mice when given orally in high concentrations.

Section X — Additional Information — Continued

Ingredient No.	Name	CAS No.	Vapor Pressure (mm Hg @ 20°C)	Exposure Limits
18. 19.	Organo Non- hazardous inorganic pigment	None None	None None	None None
20.	Diatoma- ceous earth	7631-86-9	None	10 mg/m³-A

Repeated and prolonged overexposure may lead to chronic lung disease.

21.	Barium metaborate	None	None	None
22.	Sodium silicate	1344-09-8	None	None
23.	Potassium silicate	1312-76-1	None	 None

Key to Exposure Limits: A = ACGIH O = OSHAD = Du Pont S = Supplier

Notice: The data in this material safety data sheet relate only to the specific materials designated herein and do not relate to their use in combination with any other material or in any process unless specifically stated.

Product Manager Maintenance Finishes

NPCA

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor, Essentially Similar, to Form OSHA-20)

Section I

MANUFACTURER S NAME

Bender's Wholesale Dist., Inc.

STREET ADDRESS 1027 S. Main Street

CITY, STATE, AND ZIP CODE

Elkhart, IN 46515

EMERGENCY TELEPHONE NO. (219) 293-0531

PRODUCT CLASS APPOSOI Paint

MANUFACTURERS CODE IDENTIFICATION IFOE002

Bender's Silicone Lubricant

Section II — HAZARDOUS INGREDIENTS					
INGREDIENT	PERCENT	PPM	'U/ mg/m²	LEL	VAPOR PRESSURE
Heptane Trichloroethylene Propane Isobutane	55.7 17.2 10.0 10.0	500 100 	2,045	1.20 1.10 1.90 2.30	Aerosol: Cans 40 PSI 0 70°F
er en					1

Section III - PHYSICAL DATA

BGILING RANGE

NA

VAPOR DENSITY

MEAVIER.

LIGHTER THAN AIR

EVAPORATION RATE X FASTER

5.50.000

SLOWER, THAN ETHER

PERCENT VOLATILE 85

WEIGHTPER

Section IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY

FLASH POINT Aerosol -10°F

us See 1

Use carbon dioxide dry chemical or foam. EXTINGUISHING MEDIA

unusual fire and explosion hazards Exposure to heat may cause bursting of aerosol can.

special first fighting procedures. Water spray may be ineffective. Water may be used to cool containers to prevent bursting. If water is used, fog nozzles are preferable. Wear goggles and self contained breathing apparatus.

Section V — HEA	LTH HAZARD DATA
	irritation of the respiratory tract or racterized by headache, dizziness, usness or coma.
warm and quiet. Notify physician. of running water for at least 15 minutes.	from exposure, restore breathing, keep Eyes - Flush with copious quantities utes, take to physician for medical and water, remove contaminated clothing.
Section VI — R	EACTIVITY DATA
HAZARDOUS DECOMPOSITION PRODUCTS May produce had decomposition. Fumes may contain carl	bon monoxide.
HAZAPOOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR.	CUR (CINE CONTROL CONT
Section VII — SPILL C	R LEAK PROCEDURES
	ove all sources of ignition, avoid
breathing vapors, ventilate area. WASTE DISPOSAL METHOD DO NOT INCINERATE AERO	OSOL. dispose of in accordance with
local, state and federal regulations	•
Section VIII — SPECIAL PI	ROTECTION INFORMATION
HESPIHATORY PROTECTION Avoid continuous breat	hing of vapors and spray mist.
	n en let gelt en lagendaritet bli de werden en let
ventuation Use with adequate ventilation	n.
	The state of the s
PROTECTIVE GLOVES EVE PROTECTION	
OTHER PROTECTIVE EQUIPMENT	
	CIAL PRECAUTIONS JEEP SAN CONTROL STATES
	store above 120°F. Exposure to heat or
prolonged exposure to sun may cause :	Dursting.
	The state of the s



Fel-Pro Incorporated 7450 N McCormick Blvd. Box+C1103 Skokie Illinois/60076 Phone (312) 761-4500 and 674-7700

MATERIAL SAFETY DATA SHEET

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Fel-Prolincorporated ADDRESS (Number Street) City (State) and YZP (Code)	e II	linois 60	0076		· //·
ADDRESS (Number 1) Street, Crity, Sharanga 21 (1942), Skoki 7450 N. McCormick Blyd., Skoki CHEMICAL NAME 14 NO 15 NO 19	1	CIVIT; AR	Prollock Stud Type	- 14	
CHEMICAL FAMILY Polyfunctional dimethacrylate n	nono	mers	Not applicable Mixture		• • • •
consequent and cold for cold for the cold fo					i dese
ŞECTIO	N II				Taxon:
PAINTS PRESERVATIVES AND SOLVENTS	% .	(Units)	ALLOYS AND METALLIC COATINGS	%	(Units)
PIGMENTS	1		BASE METAL		
CÄTALYST			ALLOYS,		1.74
VEHICLE.	·		METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES	14	1111	OTHERS 11 1		
OTHERS	200	12.11	· · · · · · · · · · · · · · · · · · ·		-1 1
HAZARDOUS-MIXTU	RES OF	FITHER LIQUIDS	S, SOLIDS, OR CASES	%	(Units)
o-Benzoic súlfimide (Saccharin)				2.3	none
Balance of product is essentially					listed
			rdous per U.S. Department of Labor		. 4
O.S.H.A. criteria re: 29CFR 19	10.12	200 Hazo	ard Communications Law.		
Construction of the contract o					Alle The secondary
S. C. Monzello S.	CIIC	SMAIN	TOPPORTS CONVEY (U.S. 1)	1	· · · · · · · · · · · · · · · · · · ·
BOILING POINT (°F.) (@ I'mmHg	~5	00°F	SPECIFIC GRAVITY (H ₂ O=1)	1.0	
VAPOR PRESSURE (mmHg:)	Ni	1	PERCENT VOLATILE BY VOLUME (%)	< 0.	1 10
The transfer of the second properties and the second properties and the second and the second and the second secon		ot Applic	DEVAPORATION RATE (=1)	No	t Appli
VAPOR DENSITY AIR-11				1	1
SOLUBILITY IN WATER	Ins	soluble	A second section of the second section is a second section of the second section secti	1	de ample, o
	Ins	soluble	mild pleasant odor.	1	79.75
SOLUBILITY IN WATER	I-Ins	soluble ed liquid,	the stay the weap time a begin of manager. The start of		/ /1\TS
SOLUBILITY IN WATER APPEARANCE AND ODOR Not applicable, SECTION IV-	Re-Ins	soluble ed liquid,	EXPLOSION HAZARD DATA FLAMMABLE LIMITS Lei		Uel
APPEARANCE AND ODOR Not applicable, SECTION JV- FLASH POINT (Method Used) material polymerizes above 200	FIR O°F	soluble ed liquid, E_AND	EXPLOSION HAZARD DATA	 	
APPEARANCE AND ODOR Not applicable, FLASH POINT (Methodiued) material polymerizes above 200 EXTINGUISHING/MEDIA Use water fog, dry chemicals, 1	FIR Foam	soluble ed liquid, E AND I	EXPLOSION HAZARD DATA FLAMMABLE LIMITS Lei		Uel

incompletely burned hydrocarbons are released through pyrolysis.

1977-1077, 647.7 (e. 16.1)

Revised: 10-18-85 John Michna

A CONTRACTOR OF THE PROPERTY OF THE PARTY OF

A 101 .

* Keep out of reach of children.

SPARTAN CHEMICAL CO., INC. MATERIAL SAFETY DATA SHEET

			CTION I IDENTIFICATION			
PRODUCT NAME OR NUMB BH-38 HANUFACTURER'S NAME Spartan Chemical Co ADDRESS (NUMBER, STR 110 N, Westwood Ave. HAZARDOUS HATERIAL D Unrestricted ADDITIONAL HAZARD CL	., Inc. EET, CITY , Toledo, ESCRIPTIO	appears on label) , STATE AND ZIP CODE) OH 43607 N, PROPER SHIPPING NAME		00-503-6728	51 'S D-U-N-5 NO.	
n/a CHEMICAL FAMILY n/a				FORMULA n/a		
		SECTION II - H	AZARDOUS INGREDIENT	S	·	
CAS REGISTRY NO.	XW .	CHEMICAL NAME(5)	TLV	LISTED AS A CA IN NTP, IARC (1910(Z) (SPEC	or osi
111-76-2	5~10 .	Butoxyethano1		120 mg/M ³	No.	

	SECTION III - PHYSICAL DATA		
BOILING POINT	SPECIFIC GRAVITY (H20 = 1)		·
212 °F °C	1.045		
VAPOR PRESSURE 18		PERCENT SOLID BY	
6 75 of oc x mm Hg pai		WEIGHT (%) = 5-10	
VAPOR DENSITY (AIR = 1)	EVAPORATION RATE (but, ace, = 1)	•	
Unknown	<1		
SOLUBILITY IN WATER	APPEARANCE AND ODOR		÷.
Complete	Pink, nonviscous, mild solvent odor		
pH		IS MATERIAL: (LIQUID)	SOLID
12.0-12.4			OWDER
		· · · · · · · · · · · · · · · · · · ·	<i>i.</i>

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

METHOD USED - ASIM - D92

·None of oc EXTINGUISHING MEDIA FLANNABLE LIMITS - n/a

IF1

LEL.

ˈu/a

FLASH POINT

SPECIAL FIRE FIGHTING PROCEDURES

n/a,

UNUSUAL FIRE AND EXPLOSION HAZARDS

n/a

SECTION V =	HEALTH HAZARI	DATA			à de la
EFFECTS OF OVEREXPOSURE - CONDITIONS TO AVOID		IMIT VALUE - No	t established		3,1
ryness of skin with prolonged contact; dizziness	•		•		*
with excessive breathing of vapors.				•	
· PRIMARY ROUTES OF ENTRY INHALATION x SKIN	CONTACTx	OTHER (SPECT	FY)		
					1
, COMDITIONS AGGRAVATED BY USE - Unknown			•	•	!
EMERGENCY AND FIRST AID PROCEDURES - Flush eyes or s	delo for at la				
tation persists, call a physician. If swallowed, in					
and sticking finger down throat. Never give anythin					
The south and the second secon			portoni, our	a physical	
SECTION VI	- REACTIVITY	DATA -			
STABILITY: UNSTABLE CONDITIONS TO AVOID					
STABLEX					
	•				
INCOMPATIBILITY (MATERIALS TO AVOID)	1 .	•			,
Strong oxidizing agents					
•		•			
HAZARDOUS DECOMPOSITION PRODUCTS					
None known					
					;
HAZARDOUS HAY OCCUR CONDITIONS TO) AVUID .				
POLYMERIZATION: WILL NOT OCCUR x					ĺ
CCOTTON WIT CO	TIL OD LEAV I	andecorner c	·		
SECTION VII - SP STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SP		RUCEDURES			
, lush through normal sanitary sewer system with larg		water			
, iden chrough normal sanitary power dyseem when idea	go ambonico or	nacor •			
WASTE DISPOSAL METHOD	•			_	
Same as above.					
	•	•			
		. ·		 	
SECTION: VIII - SPEC	CIAL PROTECTI	ON INFORMATION			
RESPIRATORY PROTECTION (SPECIFY TYPE)		•			
None					
LOCAL EXHAUST (SPECIFY RATE) - X	•	•	SPECIAL		
VENTILATION:			NTIFO		
MECHANICAL (GENERAL) (SPECIFY RATE)		•	OTHER .		
GROTEGIVE O ONCE (CRECIEV IVEE)	EVE DONTER	TION (SPECIFY T	voc 1		
PROTECTIVE GLOVES (SPECIFY TYPE) Solvent resistant	Safety gla		1767		
2014ENC TEOLOGIC	Janoty gla	3000		•	
OTHER PROTECTIVE EQUIPMENT		•		•	
, None-necessary	• •	•			•
, 1,010 11000000			•		
SECTION IX - SE	PECIAL PRECAU	TIONS			
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING			***************************************		
Nothing special	•			-	
				• •	
OTHER PRECAUTIONS - None					
		•	•	•	
Sparten Chemical Co., Inc.	NAME	Thomas J. Mi	chell	,	
вн-38	TITLE	Assistant Vi	ce President, R	esearch	
Ref: 29 CFR 1910:1200 (OSHA)	DATE	Ausust 7, 19	35		



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MACHERA TANGCE GUC

*NAIF = NO APPLICABLE INFORMATION FOUND

MATERIAL SAFETY DATA SHEET



Please rate consistent with NFPA Code SECTION I NAME AND PRODUCT акто си де их ача тогрузта Анол т MANUFACTURER'S NAME OF THE DOLLAR AND A CONTACT NORTON COMPANY THOMAS Z. RICHARDS ADDRESS (STREET, CITY, STATE AND ZIP CODE) EMERGENCY TELEPHONE NO. - J 1 NEW BOND STREET, WORCESTER, MA 01606-2698 617-795-2690 TRADE NAME, COMMON NAME OR SPECIFICATION APPROVED B VITRIFIED BONDED ABRASIVE PRODUCTS CHEMICAL FAMILY OR PRODUCT TYPE ANY GRADE SECTION II COMPOSITION PER 29CFR 1910.1200 (G) (4) **OSHA** MAX REG* CAS ACGIH **COMMON NAME** CHEMICAL NAME PERMISSIVE (Y/N) EXPOSURE LIMIT N Alundum 1344-28-1 15mg/m³ 10mg/m³ Alpha Alumina 96 (Total Dust) (Total Dust) 409-21-2 15mg/m³ 10mg/m3 N Silicon Carbide Crystolon 96 (Total Dust) (Total Dust) 17.2 Paraffin Wax **NAIF See Section VI No. 12 Treatment 23 1.N Rosin Wax Mixture 16 **NAIF See Section V1 N No. 5 & 6 Treatment . 41. 7704-34-9 **NAIF **NAIF Sulfur -, N ulfur Treatment of many all a man Note: Wheel Treatments range from 9 to 43% concentration based on wheel weight. *Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard, and/or the Massachusetts General Law Chapter 111F, Right To Know Regulations... SECTION III PHYSICAL AND CHEMICAL DATA 3.53 **NAIF BOILING POINT **NAIF MELTING POINT -47/ SPECIFIC GRAVITY 2-4 PERCENT VOLATILE BY VOL **NAIF VAPOR PRESSURE **NAIF VAPOR DENSITY **NAIF EVAPORATION RATE "NAIF SOLUBILITY IN WATER Slight SOLUBILITY IN ALCOHOL **NAI APPEARANCE AND ODOR SOLUBILITY IN OTHER SOLVENT ... NAIF SOLID PRODUCT: MAY GIVE OFF ODOR IN USE. 71 C SECTION IV SPECIAL PRECAUTIONS PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE - NONE. OTHER PRECAUTIONS: 844, 5, A 3480, 43 N, 07 C 78 T 1 TC1 SEE MAIF AH FAH CTREMOUDDED EE 16 2N SECTION V CORROSIVITY AND REACTIVITY DATA UNSTABLE □ STABLE ☑ ···STABILITY · · · POLYMERIZATION MAY OCCUR [] WILL NOT OCCUR INCOMPATABILITY (MATERIALS TO AVOID) 1: Avoid acids of all types with a PH \leq = 4.0 DECOMPOSITION PRODUCTS use, dusts are generated. In most cases, the airborne material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products. CONDITIONS TO BE AVOIDED ... **NAIF Carlotte Carlo

*** N/A = NOT APPLICABLE

	CECTIONIVI LIENT THE FIRST AND AND AND	
	SECTION VI HEALTH, FIRST AID AND MED	DICAL DATA
RIMARY ROUTE(S) F ENTRY	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND MEDICAL INFORMATION
MHALATION DURING GRINDING)	ACUTE: COUGHING, SHORTNESS OF BREATH, CHRONIC: MAY AFFECT BREATHING CAPACITY.	REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEEDEL OBTAIN MEDICAL ASSISTANCE.
NGESTION OURING GRINDING)	NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.	OBTAIN MEDICAL ASSISTANCE.
KIN CONTACT & ABSORPTION DURING GRINDING)	SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.	WASH AFFECTED AREAS WITH SOAP AND WATER, OBTAIN MEDICAL ASSIS-AN TANCE. YMARMOD MOTROM
YE (DNIDNING GRINDING)	DUSTS MAY IRRITATE EYES.	WASH WITH LARGE AMOUNTS OF THULA WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.
THER POTENTIAL IEALTH RISKS OURING GRINDING)	GRINDING MAY CREATE ELEVATED SOUND LEVELS WHICH MAY AFFECT HEARING.	OBTAIN, MEDICAL ASSISTANCE, PATIV
		CHEMICAL FAMILY OF PRODUCT TYPE AND
S	ECTION VII STORAGE, HANDLING AND USE	PROCEDURES
IORMAL STORAGE AND HA EEE ANSI STANDARD B7		CHRIMON, MAME
IORMAL USE IANDLE WITH ADEQUA !9CFR1910.1000 (AIR CC	TE VENTILATION. SEE OSHA 29CFR1910.94 (INTAMINATES)	(VENTILATION) and
TEPS TO BE TAKEN IN CASI NORMAL CLEANUP PRO		No. 18 Providence
	METHODS CONSISTENT WITH APPLICABLE FE O FLOURIDES MAY HAVE SLIGHTLY SOLUBL	
		en in the same was to be a second of the same
	SECTION VIII PERSONAL PROTECTION IN	FORMATION
RESPIRATORY PROTECTION	I (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUST	RESPIRATORS SEE OSHA 29CFR1910.134.
VENTILATION LOCAL RECO	DMMENDED	10 (10 to 10
MECHANICAL (GENERAL)	RECOMMENDED	The second of the second secon
OTHER	**NAIF	The second secon
	and the state of t	TO ACT THE RESIDENCE OF THE HISTORY
PROTECTIVE GLOVES	AS DESIRED BY USER	
YE PROTECTION	RECOMMENDED SEE OSHA 29CFR1910.133	
OTHER EQUIPMENT	AS NEEDED HEARING PROTECTION SEE OSHA 29	9CER1910 215 (HEARING PROTECTION) 1936
	JRING REPAIR AND MAINTENANCE OF CONTAMINA	the state of the s
FACT WITH THIS MATERIAL SEE SECTIONS VII & V		1,007000
	SECTION IX FIRE AND EXPLOSION HAZA	ARD DATA
LASH POINT **NAIF	(METHOD USED ***N/A	FLAMMABLE LIMITS LEL N/A UEL ***N/A
EXTINGUISHING MEDIA	USE WATER	Life Annual Control of the Control o
SPECIAL FIRE FIGHTING PR	OCEDURES NONE	A CONTRACTOR OF THE CONTRACTOR
EXPLOSION POTENTIAL **		and the control of the second
		and the second s

FOR COMPANY USE

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Norton Company makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.



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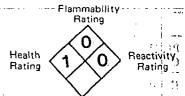
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HAZARD RATING
Please rate consistent with NFPA Code

The state of the second second second second		SECTION I NAME	AND P	RODUCT				;;
MANUFACTURER'S NAME NORTON COMPANY	arais GMAG	est.				CONTACT	Z. RICHARDS	S
ADDRESS (STREET) CITY, STATE AND ZI	P-COD						Y TELEPHONE NO	
TRADE NAME, COMMON NAME OR SPEC							Brayana	* .
RUBBER & SHELLAC BONDE	•		÷			DATE (118 18 6	
CHEMICAL FAMILY OR PRODUCT TYPE		ANY GRADE						
SEC*	LION	II COMPOSITION PE	R 29C	FR 1910.1200	(G) (4)			
CHEMICAL NAME	MAX %	COMMON NAME	REG* (Y/N)	CAS #	PER	DSHA MISSIVE URE LIMIT	ACGIH TLV	CY (X) CY (CII) CY (CII)
Silene (Total Dust)	2	***N/A	.Y	63231-67-4	1.5	img/m³	5mg/m ³	N
Sulfur	8	Sulfur	Y	7704-34-9	*	NAIF	**NAIF	N
Fluorides (as F)	2	***N/A	Y	***N/A	2,5	mg/m ³	2.5mg/m ³	N
Zinc Oxide (as fume)	15	***N/A	Y	1314-13-2	5r	ng/m³	5mg/m ³	N
Iron Oxide (as fume) 1990 ON BLEE	23	***N/A	Y	1309-37-1	10	mg/m³	5mg/m3 *	N
Carbon Black	11	***N/A	Y	1333-86-4	3.5	img/m³	3.5mg/m ^{3 1.}	N
Dibutyl Phthalate	1	***N/A	Y	84.74-2	5r	ng/m³	5mg/m ³	N
Methyl Tuads	1	***N/A	Y	137-26-8	# 1	'NAIF	5mg/m ³ ::	N
The chemicals listed above may be a part	of the	bond system. The grindin	a wheel i	may be comprised (of one o	r more of th		Vec .
* Alpha Alumina 10 a GMA TANTS	: (,	Alundum	Y	1344-28-1	10	Omg/m ³ otal Dust)	10mg/m ³ (Total Dust)	N
Silicon Carbide	90	· Crystolon	Y	409-21-1		Omg/m ³ otal Dust)	10mg/m³ (Total Dust)	N
Zirconium Oxide 2007	⁷ 90 ^{//}	Zirconia	Y	**NAIF	ı	mg/m3	5mg/m³	N
*Materials are regulated by OSHA 29 CFR 19 Regulations.	10,120	O, Hazard Communication St	andard, ar	nd/or the Massachuse	tts Gene	al Law Chapte	r 111F, Right To K	Jow
					··		:	$\exists \forall$
and the second s		••						i
and the second of the second o	SECT	ION III PHYSICAL	AND C	HEMICAL DAT	Α			
BOILING POINT **NAIF	••	MELTING POINT **NA	IF			SPECIFIC G	BAVITY 2-4	
VAPOR PRESSURE **NAIF		PERCENT VOLATILE BY		NAIF		VAPOR DE	SITY **NAIF	1
EVAPORATION RATE **NAIF .		SOLUBILITY IN WATER				SOLUBILIT	Ý IN ALCOHOL **	NAIF
SOLUBILITY IN OTHER SOLVENT **N	AIF		APPEARA SOLID PE	ANCE AND ODOR RODUCT: MAY GIV	E OFF C	DOR IN USE		3
(95)10 : 100 : 000 A BH 215.0	310.100	SECTION IV SPECIA	AL PRE	CAUTIONS				$ \cdot $
PRECAUTIONS TO BE TAKEN IN HANDL OTHER PRECAUTIONS:	ING AN	ID STORAGE – NONE.						l á
**NAIF					•		100	
SE	CTIO	NV CORROSIVITY	AND F	REACTIVITY D	АТА			11.5
STABILITY UNSTABLE		LE 🔀 POLYMERIZ	ATION	MAY OCCU	JR 🛘	WILL NOT	OCCUR 🗷	
INCOMPATABILITY (MATERIALS TO AV	(סוס)							1.
DECOMPOSITION PRODUCTS		**************************************			·		·	
use, dust and decomposing resin sy cantly greater than the grinding wheel	stem 1	fumes are generated. In monents. Coolants may pro-	nost case duce oth	s, the material ren er decomposition (noved fi product	om the work s.	piece will be sign	ifi-
CONDITIONS TO BE AVOIDED **NAIF				·.				
*NAIF = NO APPLICABLE INFORMATION	FOUND) *** N/A = NOT AP	PLICABL	E				

PRIMARY ROU	TE(S)	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND
OF ENTRY () INHALATION (DURING GRIND)	ING)	ACUTE: COUGHING, SHORTNESS OF BREATH. CHRONIC: MAY AFFECT BREATHING CAPACITY.	MEDICAL INFORMATION REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEEDED- OBTAIN MEDICAL ASSISTANCE.
INGESTION (DURING GRINDI	ING) TOATHOE	NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.	OBTAIN MEDICAL ASSISTANCE.
SKIN	ABSORPTION"	SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.	WASH AFFECTED AREAS WITH SOAP AND WATER. OBTAIN MEDICAL ASSISTANCE.
EYE (DURING GRIND)	ing)	DUSTS MAY IRRITATE EYES.	WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.
OTHER POTEN HEALTH RISKS (DURING GRIND)	S	GRINDING MAY CREATE ELEVATED SOUND "LEVELS WHICH MAY AFFECT HEARING.	OBTAIN MEDICAL ASSISTANCE.
ar isaa k	1	Secretary 1	
	S	ECTION VII STORAGE, HANDLING AND US	E PROCEDURES
NORMAL STOR			
	TH ADEQUAT	TE VENTILATION. SEE OSHA 29CFR1910.94 NTAMINATES)	(VENTILATION) and
STEPS TO BE'T	AKEN IN CASE	OF LEAKS OR SPILLS.	
NORMAL CL	FANOL LHO	CEDURES.	and a second of the second of
WASTE DISPOS	AL METHOD!!	192 - 60: 1 - 10 - 10 - 10 - 10 - 10 - 10 - 10	EDERAL, STATE AND LOCAL LAWS. LE FLOURIDE SWARF.
WASTE DISPOS STANDARD I PRODUCTS W	AL METHOD!!	PETHODS CONSISTENT WITH APPLICABLE FOR THE SELECTION OF T	EDERAL, STATE AND LOCAL LAWS. LE FLOURIDE SWARF.
WASTE:DISPOS STANDARD PRODUCTS W	SAL METHOD!! LANDFILLM VITH, LISTED	PETHODS CONSISTENT WITH APPLICABLE FOR THE SELECTION OF T	E FLOURIDE SWARF.
WASTE DISPOS STANDARD PRODUCTS W	SAL METHOD!! LANDFILL!M VITH, LISTED	JETHODS CONSISTENT WITH APPLICABLE FOR THE SELECTION OF T	E FLOURIDE SWARF.
WASTE DISPOS STANDARD I PRODUCTS W STANDARD I RESPIRATORY	AL METHOD!!! LANDFILL:M VITH LISTED	JETHODS CONSISTENT WITH APPLICABLE FELOURIDES MAY HAVE SLIGHTLY SOLUBLE STATEMENT OF THE ST	E FLOURIDE SWARF.
WASTE DISPOS STANDARD PRODUCTS W	AL METHOD!!! LANDFILL:M VITH LISTED	JETHODS CONSISTENT WITH APPLICABLE FELOURIDES MAY HAVE SLIGHTLY SOLUBLE TO SECTION VIII PERSONAL PROTECTION IN (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUS	E FLOURIDE SWARF.
WASTE DISPOS STANDARD I PRODUCTS W STANDARD I RESPIRATORY	PROTECTION LOCAL RECO	RETHODS CONSISTENT WITH APPLICABLE FOR ELOURIDES MAY HAVE SLIGHTLY SOLUBLE TO SECTION VIII PERSONAL PROTECTION IN (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUS DIMMENDED RECOMMENDED	E FLOURIDE SWARF.
WASTE DISPOS STANDARD I PRODUCTS W STANDARD I RESPIRATORY	PROTECTION LOCAL RECO	JETHODS CONSISTENT WITH APPLICABLE FELOURIDES MAY HAVE SLIGHTLY SOLUBLE STATEMENT OF THE SOLUBLE	E FLOURIDE SWARF.
WASTE DISPOS STANDARDA PRODUCTS W STANDARDA PRODUCTS W STANDARDA S	PROTECTION LOCAL RECO MECHANICAL (GENERAL) OTHER	JETHODS CONSISTENT WITH APPLICABLE FELOURIDES MAY HAVE SLIGHTLY SOLUBLE AND ASSECTION VIII PERSONAL PROTECTION IN (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUS DIMMENDED RECOMMENDED ***NAIF	E FLOURIDE SWARF.
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tions, and assumes no liability to any user thereof.

ATACKA SA

FREDLANDARD SMCCOGALENEGHAALDYS

HEALTH JAFOL BYONSHIP

LOGITETICIAN RUTTERA GOTANIA POR POR LA SELENIA SERVICIO A GOTANIA RELEGIO.

**NAIF = NO APPLICABLE INFORMATION FOUND





MATERIAL SAFETY DATA SHEET

HAZARD RATING
Please rate consistent with NFPA C

				· · · · · · · · · · · · · · · · · · ·		Licase Late CC	onsistent with MEE	7 000
A SECTION OF THE SECT	••••	SECTION I NAME	AND P	RODUCT				
AFFER OBYNAMIA OBTOGRADA					·	CONTACT	Z. RICHARE)S
ADDRESS (STREET, CITY, STATE AND ZII						EMERGENO 617-795-2	Y TELEPHONE N	0.
TRADE NAME, COMMON NAME OR SPECI	FICAT	ION				APPROVED	BY out our	ν ₁ ,
ORGANIC BONDED GRINDIN	G W	HEELS					5118186	1
CHEMICAL FAMILY OR PRODUCT TYPE ?		ANY GRADE						1.
SECT	ION	II COMPOSITION P	ER 29C	FR 1910.1200	(G) (4)) .		-
CHEMICAL NAME 2011 (N.)	MAX 1 %	?/. COMMON NAME	REG*	CAS #	PER	OSHA IMISSIVE SURE LIMIT	ACGIH TLV	CARC OGE (Y/N
Alpha-Alumina	90	Alundum	Y	1344-28-1	15mg/m³ (Total Dust)		10mg/m ³ (Total Dust)	N
Silicon Carbide	90	Crystolon	Y	409-21-2	1	img/m³ tal Dust)	10mg/m ³ (Total Dust)	N
Zirconia Oxide	90	Zirconia	Y	**NAIF		mg/m³	5mg/m ³	N
The grinding wheel may be comprised of	of 1 o	more of the above abras	ives. The	chemicals listed b	elow ma	ay be a part of	of the bond syste	m.
Fluorides (as F)	3	***N/A	. A	***N/A	2.5	mg/m³	2.5mg/m ³	N
Calcium Oxide	3	Lime	Y	1305-78-8	51	mg/m³	2mg/m³	N'
ron Disulphide	16	Pyrites	N	12068-85-8	*	*NAIF	**NAIF	N.
eosote Oil JACCH DAW STATE	<1	Carbosota	Y	8001-58-9	.2	mg/m³	.2mg/m ³ .	Y.
Barlum Sulfate 1007 (VVC 2001)	111.	Barytes	Υ	7727-43-7	.5	mg/m³	.5mg/m³	N
Glass, Fibrous or Dust	10	Fiberglass	Y	**NAIF	* 1	NAIF	10mg/m ³	N
Sulfur	-8	Sulfur	Y	7704-34-9	* 1	NAIF	**NAIF	N
Tin"	9	Tin .	Y	7440-31-5	2	mg/m³	2mg/m³	N
**Materials are regulated by OSHA 29 CFR 19 Regulations, © Listed by NTP as a Carcinoge	910.12 n.	00, Hazard Communication	Standard, a	nd/or the Massachu	setts Gen	eral Law Chap	ter 111F, Right To	Know
	SECT	ION III PHYSICAL	AND C	HEMICAL DA	TA	···		
BOILING POINT **NAIF		MELTING POINT "*NA	AIF			SPECIFIC G	RAVITY 2-4	i I
VAPOR PRESSURE . ** NAIF		PERCENT VOLATILE BY	' VOL **	NAIF	VAPOR DENSITY **NAIF			
EVAPORATION RATE **NAIF		SOLUBILITY IN WATER				SOLUBILIT	Y IN ALCOHOL *	*NAI
SOLUBILITY IN OTHER SOLVENT	AIF			ANCE AND ODOR RODUCT: MAY GI	VE OFF	DOR IN USE	•	
*		SECTION IV SPECI	AL PRE	CAUTIONS				
PRECAUTIONS TO BE TAKEN IN HANDLI	NG AN	ID STORAGE - NONE.						-
OTHER PRECAUTIONS: This grinding wheel specification may the grinding wheel will be in the total repeated skin exposure may result in skin	al mat	erials released during gri	or less) of nding. Th	a creosote oil. C e supplier of the	only trac raw cre	e amounts o osote states	f this substance f that "prolonged	rom and
SEC			AND F	REACTIVITY I	DATA			
STABILITY UNSTABLE			ZATION	MAY OCC	UR 🗆	WILL NOT	OCCUR 🕱	j
INCOMPATABILITY (MATERIALS TO AVC)ID)							
use, dust and decomposing organic greater than the grinding wheel composing CONDITIONS TO BE AVOIDED						he workpiece	e will be significa	ntly
**NAIF								į

*** N/A = NOT APPLICABLE

		CAL DATA
PRIMARY ROUTE(S) OF ENTRY	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND MEDICAL INFORMATION
INHALATION / PORTS	ACUTE: COUGHING, SHORTNESS OF BREATH. CHRONIC: MAY AFFECT BREATHING CAPACITY.	REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEEDED OBTAIN MEDICAL ASSISTANCE.
INGESTION (DURING GRINDING)	NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.	OBTAIN MEDICAL ASSISTANCE.
SKIN CONTACT & ABSORPTION (DURING GRINDING)	SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.	WASH AFFECTED AREAS WITH SOAP AND WATER. OBTAIN MEDICAL ASSISTANCE.
EYE (DURING GRINDING)	DUSTS MAY IRRITATE EYES.	WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.
OTHER POTENTIAL HEALTH RISKS (DURING GRINDING)	GRINDING MAY CREATE ELEVATED SOUND LEVELS WHICH MAY AFFECT HEARING.	OBTAIN MEDICAL ASSISTANCE.
general general and a survival of the survival	ECTION VIII OFFICE AGE HANDI MIC AND THE	
	ECTION VII STORAGE, HANDLING AND USE	PROCEDURES
NORMAL STORAGE AND HA SEE ANSI STANDARD B7		
NORMAL USE HANDLE WITH ADEQUA 29CFR1910:1000 (AIR CO	TE VENTILATION. SEE OSHA 29CFR1910.94 (\ NTAMINATES)	VENTILATION) and
STEPS TO BE TAKEN IN CASE NORMAL CLEANUP PRO	OF LEAKS OR SPILLS. CEDURES.	
NORMAL, CLEANUP PROWASTE DISPOSAL METHOD: STANDARD LANDFILL N	CEDURES.	DERAL, STATE AND LOCAL LAWS.
NORMAL, CLEANUP PRO WASTE DISPOSAL METHOD STANDARD LANDFILL M PRODUCTS WITH LISTED	CEDURES. SETHODS CONSISTENT WITH APPLICABLE FEI SELOURIDES MAY HAVE SLIGHTLY SOLUBLE	DERAL, STATE AND LOCAL LAWS. FLOURIDE SWARF.
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NORMAL, CLEANUP PROMASTE DISPOSAL METHOD: STANDARD LANDFILL M PRODUCTS WITH LISTED RESPIRATORY PROTECTION VENTILATION LOCAL RECOMECHANICAL— (GENERAL) OTHER PROTECTIVE GLOVES	DEDURES. SETHODS CONSISTENT WITH APPLICABLE FEID FLOURIDES MAY HAVE SLIGHTLY SOLUBLE SECTION VIII PERSONAL PROTECTION INFOSPECIFY TYPE) AS NEEDED. FOR APPROVED DUST DIMMENDED RECOMMENDED **NAIF	DERAL, STATE AND LOCAL LAWS. FLOURIDE SWARF. ORMATION RESPIRATORS SEE OSHA 29CFR1910.134
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The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Norton Company makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.



Health Rating

Rating 0

Reactivity Rating

MATERIAL SAFETY DATA SHEET

HAZARD RATING
Please rate consistent with NFPA Cod

and the same appearance of the contract of the same and the same and the same and the contract of the same and	SECTION	NAME AND FRU
MANUFACTURER'S NAME AND		
NORTON COMPANY		

CONTACT
THOMAS Z. RICHARDS

ADDRESS (STREET, CITY, STATE AND ZIP CODE)
1:NEW BOND:STREET, WORCESTER, MA 01606-2698

EMERGENCY TELEPHONE NO. . . 617-795-2690

TRADE NAME, COMMON NAME OR SPECIFICATION

APPROVED BY

DIAMOND OR CUBIC BORON NITRIDE GRINDING WHEELS BOND TYPES B100, BX102, BX103, BX104, BX105, MX135, MX143, MX146, MX149, MX153, MX158, MX165, MX173, MX174, MX175, MX176, MX194, MX196, MX208, MX210, MX213, MX214, MX32, MX33, MX34, MX35, MX36, MX37, MX87, MX88, MX90

of themer

CHEMICAL FAMILY OR PRODUCT TYPE

ANY GRADE

SECTION II COMPOSITION PER 29CFR 1910.1200 (G) (4)

CHEMICAL NAME	MAX %	COMMON NAME	REG*	CAS #	OSHA PERMISSIVE EXPOSURE LIMIT	ACGIH TLV	CAR OGE (Y/
Copper	.30	Copper	Y	7440-50-8	1mg/m³	1mg/m ³	N
Tin	25	Tin	Υ	7440-31-5	**NAIF	**NAIF	N
Graphite Section 1997	25′.	Graphite	Y	7882-42-5	15MPPCF	5mg/m³ (Total Dust)	7 N
Calcium Oxide	5	Lime	Υ	1305-78-8	5mg/m ³	2mg/m³	N
Silicon Carbide	20	Crystolon	Y	409-21-2	15mg/m³ (Total Dust)	10mg/m³ - (Total Dust)	N
Silver	15	Silver	Y	7440-22-4	.01mg/m3	.1mg/m³	/N
luorides (as F) Service A 11 A 16	10	***N/A	Y	***N/A	2.5mg/m ³	2.5mg/m ³	N
Cobalt 1 111/2007, 11/17	65	'Cobalt .	Y	7440-48-4	.1mg/m³	.1mg/m³	N
Chromium Salts (Trivalent)	7	Chromium	Y	16065-83-1	.1mg/m³	.05mg/m ³	Y

Note: Listed chemicals may be a part of the bond system in the usable part of the wheel.

SECTION III PHYSICAL AND CHEMICAL DATA

ILING POINT **NAIF	MELTING POINT >220°C	SPECIFIC GRAVITY 2-4
APOR PRESSURE **NAIF	PERCENT VOLATILE BY VOL **NAIF	VAPOR DENSITY **NAIF
APORATION RATE **NAIF	SOLUBILITY IN WATER Slight	SOLUBILITY IN ALCOHOL NAIF

SOLUBILITY IN OTHER SOLVENT . NAIF

CHO DE GRARINO POLITA DO D

APPEARANCE AND ODOR

SOLID PRODUCT: MAY GIVE OFF ODOR IN USE.

SECTION IV SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE - NONE.

OTHER PRECAUTIONS:

••NAIF

11 8 4 14 5 15

THE PART OF THE PROPERTY OF T

COMPATABILITY (MATERIALS TO AVOID)

**NAIF

DECOMPOSITION PRODUCTS

In use, dust and decomposing organic fumes are generated. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products.

CONDITIONS TO BE AVOIDED

•NAIF = NO APPLICABLE INFORMATION FOUND

* * * N/A = NOT APPLICABLE

^{*}Materials are regulated by OSHA:29 CFR. 1910.1200, Hazard Communication Standard, and/or the Massachusetts General Law Chapter 111F, Right To Knov Regulations. © Listed by NTP as a Carcinogen.

,	<u>,</u>	SECTION	VI HEALTH,	FIRST AID A	ND MEDI	CAL DATA	্ :
PRIMARY ROU OF ENTRY	TE(S)		CHRONIC HEA TS OF OVEREX			FIRST AID AND MEDICAL INFORMATION	i
INHALATION (DURING GRINDI			JGHING, SHOR MAY AFFECT B			REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEED OBTAIN MEDICAL ASSISTANCE.	DED
INGESTION (DURING GRIND)	NG) BAWAR	1	ADVERSE EFFI			OBTAIN MEDICAL ASSISTANCE.	
SKINA MARKET	ABSORPTION		EXPERIENCE S	KIN IRRITATIO	DN	WASH AFFECTED AREAS WITH SOA AND WATER. OBTAIN MEDICAL ASS TANCE.	
EYE (DURING GRÎNDÎ	NG)	DUSTS MAY		ES.		WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.	
OTHER POTEN HEALTH RISKS (DURING GRIND)	garan kalendarian dari dari bermeran. Kalang		MAY CREATE E ICH MAY AFFE		ND	OBTAIN MEDICAL ASSISTANCE.	
		190 125 visto					<u> </u>
** **			STORAGE, I	HANDLING A	ND USE	PROCEDURES	
NORMAL STOR							
NORMAL USE HANDLE,WIT 29CFR1910.1	H ADEQUA			SHA 29CFR1	910.94 (\	/ENTILATION) and	
STEPS TO BE TO NORMAL CL			R SPILLS.				
WASTE DISPOS STANDARD I PRODUCTS W	ANDFILL N	IETHODS CO	ONSISTENT W S MAY HAVE	TITH APPLICA SLIGHTLY S	ABLE FEC	DERAL, STATE AND LOCAL LAW FLOURIDE SWARF.	s.
KOVI (a.a.)	Z. L. Const.	ant !	: -				
		SECTION \	/III PERSON	AL PROTECT	TION INF	ORMATION	
RESPIRATORY	PROTECTION	(SPECIFY TY	PE) AS NEEDED	. FOR APPROV	ED DUST	RESPIRATORS SEE OSHA 29CFR1910.1	134.
VENTILATION	LOCAL RECO	MMENDED					
	MECHANICAL (GENERAL)	RECOMME	NDED				7
***************************************			····				
		Sant man man a				· · · · · · · · · · · · · · · · · · ·	
PROTECTIVE G	COURSO PORA		D BY HEED				1 1
EYE PROTECTI				A 200E P 1010 1			
						CFR1910.215 (HEARING PROTECTION)	
TACT-WITH TH	BE TAKEN DU	IRING REPAIR	R AND MAINTE			ED EQUIPMENT THAT HAS BEEN IN C	<u>-</u>
<u>: </u>		SECTIO	N IX FIRE AN	D EXBI OSIO	NHAZAE	RD DATA	
FLASH POINT	**NAJF	0201101		USED ***N/A	IN TIMEMI	FLAMMABLE LIMITS LEL N/A UEL *	**N/^
EXTINGUISHIN		USE WATER		. IV/A) - I min is a chill to be N/A OEL	- 14/A
SPECIAL FIRE			NONE				-
EXPLOSION PO		NAIF					_ [
		· · · · · · · · · · · · · · · · · ·					
	tion and recom	y mendations set	•	COMPANY USI		or to be accurate as of the data baroof; how	

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Norton Company makes no warranty with respect to the accuracy of the information or the suitability of the recommenda-

tions, and assumes no liability to any user thereof.





Reactivit Rating

1 15

MATERIAL SAFETY DATA SHEET

HAZARD RATING Please rate consistent with NFPA Coc

Rating

SECTION I NAME AND PRODUCT

MANUFACTURER'S NAME OF THE COLUMN NORTON COMPANY

CONTACT THOMAS Z. RICHARDS

ADDRESS (STREET, CITY, STATE AND ZIP CODE)

1 NEW BOND STREET, WORCESTER, MA 01606-2698

COMPLETE A CONTROL

WHITACOCCHAN JAMES CO

JULIBIUS FOR IMOM BEEV REAL HERBERALF MARKET

> EMERGENCY TELEPHONE NO. > 617-795-2690

TRADE NAME, COMMON NAME OR SPECIFICATION

DIAMOND OR CUBIC BORON NITRIDE GRINDING WHEELS ALL OTHER BONDS

CHEMICAL FAMILY OR PRODUCT: TYPE (1) TO ANY GRADE

SHOW AROUND HE HELD OF

SECTION II COMPOSITION PER 29CFR 1910.1200 (G) (4)

CHEMICAL NAME	MAX	COMMON NAME	REG*	CAS #	OSHA PERMISSIVE EXPOSURE LIMIT	ACGIH TLV	CAR OG IY/
Copper	75	Copper	Y	7440-50-8	1mg/m ³	1mg/m ³	I,N
Tin	25	Tin	Y	7440-31-5	**NAIF	**NAIF	N
Graphite	20	Graphite	Y	7782-42-5	15MPPCF	5mg/m ³ (Total Dust)	N
Calcium Oxide	5	Lime	Y.	1305-78-8	5mg/m ³	2mg/m³	N
Silicon Carbide	20	Crystolon	Y	409-21-2	15mg/m ³ (Total Dust)	10mg/m ³ (Total Dust)	N
Nickel	20	Nickel	Υ	7440-02-0	1mg/m ³	1mg/m ³	Y
Phosphorus	1	Phosphorus	Y	7723-14-0	.1mg/m ³	.1mg/m³	N
Npha-Alumina SARAC JUNIONA BEASE	30	Alundum	Y	1344-28-1	15mg/m³ (Total Dust)	10mg/m ³ (Total Dust)	N
Manganese	5	Manganese	Y	7439-96-5	**NAIF	5mg/m³	N
Molybdenum	1	Molybdenum	Y	7439-98-7	15mg/m ³	10mg/m ³	N
Iron Oxide Fume	30"	Iron Oxide	Y	1309-37-1	10mg/m ³	5mg/m ³	N
Silicon Powder	3	. Silicon Powder	Y	7440-21-3	**NAIF	**NAIF	N
· Note: Listed chemicals may be part o	f the b	ond system in the usable	part of th	e wheel,			,

Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard, and/or the Massachusetts General Law Chapter 111F, Right To Knov Regulations. @ Listed by NTP as a Carcinogen.

SECTION III PHYSICAL AND CHEMICAL DATA

BOILING POINT **NAIF	MELTING POINT >220°C	SPECIFIC GRAVITY 2-4
VAPOR PRESSURE "NAIF"	PERCENT VOLATILE BY VOL **NAIF	VAPOR DENSITY **NAIF
	SOLUBILITY IN WATER Slight	SOLUBILITY IN ALCOHOL **NAIL
-SOLUBILITY IN OTHER SOLVENT **NAIF	APPEARANCE AND ODOR	ODOR IN USE

SECTION IV SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE - NONE. OTHER PRECAUTIONS:

ALMONABLE LIMITOR FOR MAKING COMMANDA SECTION V CORROSIVITY AND REACTIVITY DATA

UNSTABLE T STABLE POLYMERIZATION MAY OCCUR WILL NOT OCCUR X STABILITY

OMPATABILITY (MATERIALS TO AVOID)

DECOMPOSITION PRODUCTS

In use, dust and decomposing organic fumes are generated. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products.

CONDITIONS TO BE AVOIDED ..NAIF

*NAIF - NO APPLICABLE INFORMATION FOUND

••• N/A = NOT APPLICABLE

	<u> </u>	SECTION VI HEALTH, FIRST AID AND MED	ICAL DATA	
PRIMARY ROU OF ENTRY	FE(S)> determ	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND MEDICAL INFORMATION	
INHALATION (DURING GRINDI	NG)	ACUTE: COUGHING, SHORTNESS OF BREATH. CHRONIC: MAY AFFECT BREATHING CAPACITY.	REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEEDS OBTAIN MEDICAL ASSISTANCE.	= ED^
INGESTION	TOATHO TOATHO	"NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.	OBTAIN MEDICAL ASSISTANCE.	
SKIN (* 1999) (*) (DURING GRINDI	ABSORPTION ?	SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.	WASH AFFECTED AREAS WITH SOAP AND WATER. OBTAIN MEDICAL ASSI TANCE.	
EYE	NG)	DUSTS MAY IRRITATE EYES.	WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.	
OTHER POTEN- HEALTH RISKS (DURING GRIND)		GRINDING MAY CREATE ELEVATED SOUND LEVELS WHICH MAY AFFECT HEARING.	OBTAIN MEDICAL ASSISTANCE.	
popular sign of a	j 540			
Alexandra (1994)] [1892. S]	ECTION VII STORAGE, HANDLING AND USE	PROCEDURES	ــــــــــــــــــــــــــــــــــــــ
NORMAL STOR				
	H ADEQUAT	E VENTILATION. SEE OSHA 29CFR1910.94 (NTAMINATES)	VENTILATION) and	
STEPS TO BE TA	AKEN IN CASE	OF!LEAKS OR SPILLS. CEDURES. !!		la ka
-WASTE DISPOS STANDARD L PRODUCTS W	ANDFILL M	ETHODS CONSISTENT WITH APPLICABLE FE FLOURIDES MAY HAVE SLIGHTLY SOLUBLI	DERAL, STATE AND LOCAL LAWS E FLOURIDE SWARF.	,
MATERIA PARENTA				1. 4
M Contens		SECTION VIII PERSONAL PROTECTION INF		<u> </u>
RESPIRATORY	PROTECTION	(SPECIFY TYPE) AS NEEDED. FOR APPROVED DUST	RESPIRATORS SEE OSHA 29CFR1910.13	34.
-VENTILATION	LOCAL RECO	MMENDED		_
	MECHANICAL (GENERAL)	RECOMMENDED		
/	OTHER	**NAIF		
		ALLATAC BATTY A		+
PROTECTIVE	LOVESHAIDAS	AS DESIRED BY USER		10
		RECOMMENDED SEE OSHA 29CFR1910.133		1
OTHER EQUIPM		AS NEEDED HEARING PROTECTION SEE OSHA 29	CFR1910.215 (HEARING PROTECTION)	-
TACT WITH TH		RING REPAIR AND MAINTENANCE OF CONTAMINA	TED EQUIPMENT THAT HAS BEEN IN CC)N-
	<u>, , , , , , , , , , , , , , , , , , , </u>	SECTION IX FIRE AND EXPLOSION HAZA	RD DATA	-
FLASH POINT	**NAIF	(METHOD USED ***N/A	FLAMMABLE LIMITS LEL N/A UEL **	# N /
EXTINGUISHIN			T. C. WINN NOTE CHANTO LET WA OEL	14//
SPECIAL FIRE				
EXPLOSION PO				{
ever, Norton	Company mak	FOR COMPANY USE mendations set forth herein are taken from sources believes no warranty with respect to the accuracy of the informy to any user thereof.		

NORTON COMPANY



1 NEW BOND STREET WORCESTER, MA 01606-2698 (617) 795-5000

June 25, 1986

Dear Valued Customer:

In compliance with the Federal Hazard Communication Standard 29.CFR.1910.1200, we enclose five Material Safety Data Sheets for grinding wheels. The basic wheel categories include:

Vitrified Bonded Abrasive Products Rubber or Shellac Bonded Abrasive Products Organic Bonded Abrasive Products Diamond or Cubic Boron Nitride Abrasive Products

The MSDS sheets contain complete generic information required by the Federal regulation. This does not mean all materials listed are present in all abrasives or bonds. Information will be provided for a designated specification upon request.

The MSDS sheets provided should be forwarded to the individual responsible for plant safety.

Thomas Z. Richards

Manager, Product Safety Grinding Wheel Operations

eml

MATERIAL SAFETY DATA SHEET

I - FRODUCT IDENTIFICATION

(75A)557-22A/K5

Manufacturer's Name: Calgon Yestal Laboratories Division of Calgon Core.

_Addri_5035 Manchester_Ave...St. Louis. Missourl_63110 | Tel_Noi(314) 535-1810

TRADE NAME: Vesta Fower | | Froduct No.: 8258

Synonyms: Aqueous Ciquid Detergent/Degreaser

UBC00#: 380173802

DOT Proper Shipping Name: Cleaning Compound Liquid

STCC##: 4936515

II - HAZARDOUS INGREDIENTS OF MIXTURES

	Standard, 29	CFR 1910.1200, this product contains	N/A	N/A	N/A
ì				·	·

III- PHYSICAL DATA

Vapor Fressure, mm hg @ 20 C N/A	Vapor Density (Airst) 60-90 F	Ţ
Evaporation Rate (ether=1) N/A	% Volatile by wt @ 105 C/ 1 hrs 90-9	11.
Solubility in H2O Complete	PH 0 1+3 Solution 12.4	
Freezing Point F Circa 32 F	pH as Distributed 13	1
Bolling Point F @ 14.7 psig Apx.212	Appearance Clear, purple liquid	í
Specific Gravity H20=1 @ 250 1.05	Odor Near odorless	ł
		1

IV - FIRE AND EXPLOSION

į	Flash Point F N (Closed Cup) To	Boil	Tempera	ture		(Exp) Limits	
1	ExtInguishing M	led [a:	Sultable	for	surrounc	ling	area -	water,	dry

extinguishing media: Suitable for surrounding area - water, defended, foam, CO2

Special Fire Fighting Procedures: N/A

Unusual Fire and Explosion Hazards: N/A

Routes of Entry/Medical Conditions Aggravated By Exposure

Eyes: Flush eyes w/flowing water for 15 min. & call a physician.

Skin: Rinse affected area thoroughly w/flowing water.

Inhalation: N/A

Ingestion: Give large quantities of water or milk followed by vinegar or lemon juice & immediately contact a physician.

Dverexposure Effects: Product Is an eye Irritant. Not a primary skin irritant by FHSA. Acute oral LD50(rats) >5000 mg/kg. Contains no known carcinogens.

MATERIAL SAFETY DATA SHEET

75A/557-22A(K5)

VI - REACTIVITY DATA Vesta Fower

Conditions Contributing to Instability: None

Incompatibility: None known

Hazardous Decomposition Froducts: Forced ignition of dried residues may produce CD, CD2, nitrogen oxides

Conditions Contributing to Hazardous Folymerization: Will not occur

VII - SPILL OR LEAK FROCEDURES

Steps to be taken If Material Is Released or Spilled: Small spills may be mopped up & residues flushed to the sewer with water. Rinse mop before storing.

Neutralizing Chemicals: May be neutralized widilute acetic acid.

Waste Disposal Methods: Dispose spent solutions in accordance w/local regulations.

VIII - SPECIAL PROTECTION INFORMATION

[Respiratory: Eye: Olove: For Goggles or face shield manual cleaning

Other Clothing and Equipment: N/A

Ventilation: Normal room ventilation.

IX - SPECIAL PRECAUTIONS

Frecautions to be taken in Handling and Storing: This product will WITHSTAND AN OCCASIONAL ACCIDENTAL FREEZING without loss in its normal performance characteristics. It must be thoroughly thawed & agitated (roll drum) before being used. Store in heated area below 135 F.

Other Frecautions:

Read and observe labelled use instructions.

Prepared by: Destin A. LeBianc Title: Director, Froduct Development

White Setter believes that the information contained herein is accurate, suct information is offered solely for its customers, consideration and verification under their specific use conditions. This information is not to be deemed a warranty or representation of any kind for which Seller assumes legal responsibility.

*Vestal Bill of Lading Code MSD8258/MSDTXTSRC/VESTAL **Standard Transportation Commodity Code PAGE 2

Prepared: 12/15/86

MATERIAL SAFETY DATA SHEET

I - PRODUCT IDENTIFICATION

\ \75A\557-22A/R5

Manufacturer's Name: Vestal Laboratories. Inc. . A Subsidiary of Chemed Core

Addr: 5035 Manchester Ave. St. Louis. Missouri 63110 | Tet Noi(314) 535-1810

TRADE NAME: Vesta Fower

Froduct No.: 8258

Synonyms: Aqueous Liquid Detergent/Degreaser

QEUUC#1 320173205.

DOT Proper Shipping Name: Cleaning Compound Liquid

STCC### 4936515

II - HAZARDOUS INGREDIENTS OF MIXTURES

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Ϊ	MATERIAL:		IX BY WI.	1 171 U	10407 F
- 1	According to	the OSHA Hazard Communication	1		
i	Standard, 29	CFR 1910.1200, this product contains	}		
İ	no hazardous	ingredients.	N/A	NZA	N/A
- [•	1		

III- PHYSICAL DATA

the same and the s	n and they are that they have to the contract the transfer that they have the contract they have the transfer they have the contract the contract the contra
Vapor Pressure, mm hg @ 20 C N/A	Vapor Density (Airmi) 80-90 F
Evaporation Rate (ethersi) N/A	% Volatile by wt @ 105 C/ 1 hrs 90-91;
Solublilty in M20 Complete	PH @ 1+3 Solution 12.4
Freezing Point F Circa 32 F	PM as Distributed 13
^ \olling Point F @ 14.7 ps(g Apx.212	Appearance Clear, purple liquid
pecific Gravity H2O=1 @ 25C 1.05	Odor Near odorless
•	

IV - FIRE AND EXPLOSION

Flash Point F None Autoignition N/A Flammable (Explosive) Limits	NZA	
TExtInguishing Media: Suitable for surrounding area - water, dry chemical, foam, CO2	,	
Special Fire Fighting Procedures: N/A	a till bega till tett men tree beggebber	
Unusual Fire and Explosion Hazards: N/A		
V - EMERGENCY AND FIRST AID PROCEDURES	71171	

V - EMERGENCY AND FIRST AID PROCEDURES
Routes of Entry/Medical Conditions Aggravated By Exposure

Eyes: Flush eyes w/flowing water for 15 min. & call a physician.

Skin: Rinse affected area thoroughly w/flowing water.

Inhalation: N/A

Ingestion: Give large quantities of water or milk followed by vinegar or lemon juice & immediately contact a physician.

Verexposure Effects: Product is an eye irritant. Not a primary skin irritant by FHSA. Acute oral LDSO(rats) >5000 mg/kg. Contains no known carcinogens.

MATERIAL SAFETY DATA SHEET

\ 75A/557-22A(K5)

· VI - REACTIVITY DATA Vesta Fower

Conditions Contributing to Instability: None

Incompatibility: None known

Hazardous Decomposition Froducts: Forced ignition of dried residues may produce CO, CO2, nitrogen exides

Conditions Contributing to Hazardous Folymerization: Will not occur

VII - SPILL OR LEAK PROCEDURES

Steps to be taken if Material Is Released or Spilled: Small spills may be mopped up & residues flushed to the sewer with water. Rinse mop before storing.

Neutralizing Chemicals: May be neutralized w/dilute acetic acid,

Waste Disposal Methods: Dispose spent solutions in accordance w/local regulations.

VIII - SPECIAL PROTECTION INFORMATION

Respiratory:
| Eye: | Glove: For | Goggles or face shield | manual cleaning | Other Clothing and Equipment: N/A | Ventilation: Normal room ventilation.

IX - SPECIAL PRECAUTIONS

Frecautions to be taken in Handling and Storing: This product will WITHSTAND AN OCCASIONAL ACCIDENTAL FREEZING without loss in its normal performance characteristics. It must be thoroughly thawed & agitated (roll drum) before being used. Store in heated area below 135 f.

Other Frecautions:

Read and observe tabelled use instructions.

Prepared by: Destin A. LeBlanc Title: Director, Product Development

While Seller believes that the information contained herein is accurate, such information is offered solely for its customers? consideration and verification under their specific use conditions. This information is not to be deemed a warranty or representation of any kind for which Seller assumes legal responsibility.

Vestal Bill of Lading Code ISD8258/MSDTXTSRC/VESTAL **Standard Transportation Commodity Code PAGE 2

-A-Prytston-of-Calgon Corporation 5035 Manchester Ave. St. Louis, Missouri 63110 Tel:(314) 535-1810

03/10/87

JACKSON INC 55217 MARINA DR ELKHART

IN 46514

To Whom it may concern:

Please find enclosed Material Safety Data Sheet(s) as required by the recent revision in the OSHA Hazard Communication Standard.

VESTAL OBUER_NO PRODUCT NUMBER

ERODUCT DESCRIPTION

LA124

8258

YESTA POWER

Please direct the Material Safety Data Sheet(s) to your proper department(s). Thank you for Letting Vestal service you.

Sincerely,

Destin A. LeBlanc

Director, Product Development

FOR COATINGS, RESINS AND RELATED MATERIALS

2/20/86

(Approved by the Department of Latin Translated finder by hem Offith 20)

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ਹ	CCI	юп	

MANUFACTURED S HAME

Bender's Wholesale Dist., Inc.

STREET ADDRESS

1027 S. Main Street

CITY, STATE, AND IN CODE

Elkhart, IN 46516

EMERGENCY TELEPHONE HO (219) 293-0531

PRODUCT CLASS

Aerosol - Vinyl Toluene Alkyd Enamel

MANUFACTURERS CODE IDENTIFICATION

IG0E003

Bender's Flat Black Spray Paint

Section II -	HAZARDOL	ISINGHE	DIENTS
·			

INGREDIENT	PERCENT	1(/		ιει	VA,POR
		РРМ	mg/m³		PRESSURE
Toluene (108-88-3) (PEL - See bottom of this section)	8.16	100.0	375.0	1.27	Vapor
Acetone (67-64-1)	29.73	750.0	1.,780.0	2.60	Pressure Aerosol
Mineral Spirits (109-73-9)	.16			.70	Cans
Varnish Makers & Painter Naphtha (8030-30-6)	6.11	300.0	1,350.0	1.10	40 P.S.I @ 70 ⁰ F.
Xylene (1330-20-7)	5.29	100.0	435.0	1.00	
Propane (74-98-6)	18.3			2.30	
Isobutane (75-28-5)************************************	12.2			1.90	
declaration of the state of the			Į	1	i

MATERIAL

8-HOUR TIME WEIGHTED AVERAGE

ACCEPTABLE CEILING CONCENTRATION ACCEPTABLE MAXIMUM PEAK ABOVE THE ACCEPTANCE CEILING CONCENTRATION FOR AN 8 HOUR SHIFT CONCENTRATION MAXIMUM DURATION

Toluene

200 PPM

300 PPM

500 PPM

10 minutes

Section III - PHYSICAL DATA

BOILING BANGE

NA

VAPOR DENSITY

X HEAVIER.

LIGHTER THAN AIR

EVAPORATION RATE X FASTER

SLOWER, THAN ETHER

PERCENT VOLATILE

85%

MEICHLLEU NY

Section IV - FIRE AND EXPLOSION HAZARD DATA

DOTCATEGORY Consumer Commodity ORMD

手动 说:"我我就好到她

FLASHPOINT 100 F. (TOC)

LEL See II

EXTINGUISHING MEDIA, Use Carbon Dioxide, Dry Chemical or Foam.

Service of the service Committee of the second

UNUSUAL FIRE AND EXPLOSION HAZAROS Exposure to heat may cause bursting of aerosol can.

this make the property that he in-

secont einterior incernoccounts Water spray may be ineffective. Water may be used to cool containers to prevent bursting. If water is used, fog nozzles are preferable. Wear goggles and self contained breathing apparatus,

Soction V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE SOO IT

Toluene (108-88-3)

Acute Overexposure - Overexposure can lead to central nervous system depression (producing such effects as headache, dizziness, nausea, and loss of consciousness. Eye Contact - Short-term liquid or vapor contact may result in slight eye irritation. Prolonged and repeated contact may be more irritating. Skin Contact - Prolonged and repeated liquid contact can cause defatting and drying of the skin which may result in skin irritation and dermatitis. Inhalation - High concentrations or prolonged to lower concentrations may be slightly irritating to mucous membranes.

Ingestion - Liquid ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities in the lungs may result in chemical preumonitis and pulmonary edema/hemorrage.

Chronic Overexposure - Respiratory tract irritation, central nervous system (1977) depression in high concentrations, liver and kidney damage.

Brain cell damage may result from long term inhalation of toluene vapor.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact - Flush with water for 15 minutes while holding eyelids open. Get medical attention.

Skin Contact - Flush with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention.

Inhalation - Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. Ingestion - Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Get medical attention.

EFFECTS OF OVEREXPOSURE

Varnish Makers & Painter Naptha (8030-30-6)

Acute Overexposure - Central nervous system depression in high concentrations. Eye Contact - May be an irritant. Skin Contact - Prolonged or repeated contact may cause skin irritation.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact - Flush eyes with large quantities of water for at least 15 minutes and seek immediate medical attention.

Skin Contact - Wash affected area with soap and large quantities of water. Wash contaminated clothing before re-use.

Inhalation - If breathing difficulties, dizziness, or lightheadedness occur when working in areas with high vapor concentrations, victim should seek air free of vapors. If victim experiences continued breathing difficulties, administer paymen until medical assistance can be rendered. If breathing stops, begin artificial respiration and seek immediate medical attention.

Ingestion - If swallowed, do not induce vomiting. Seek immediate medical advice and/or attention.

ALL Socilor V - HEALTH HAZARD DATA

threshold that value Soc II trrecis or ovenexposure
Acetone
(67-64-1)

Acute Overexposure -

Eye Contact - Can cause severe irritation, redness, tearing, blurred vision.

Skin Contact - Prolonged or repeated contact can cause moderate irritation, defalting and dermatitis.

Inhalation - Excessive inhalation of vapors can cause nasal, and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even asphyxiation.

Ingestion - Can cause gastrointestinal irritation, nausea, vomiting and diarria.

Chronic Overexposure '- None Known

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact - Flush eyes with large amounts of water, lifting upper and lower lids occasionally. Get medical attention.

Skin Contact - Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Clean contaminated clothing prior to re-use.

Inhalation - If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep victim warm, quiet and get medical attention. Ingestion - Low toxicity - Induce vomiting if large quantities are ingested. Give two glasses of water, induce vomiting immediately by sticking finger down throat. Call a physician. Never give anything by mouth to an unconsciouss person.

EFFECTS OF OVEREXPOSURE

Xylene
(1330-20-7)

Accute Overexposure -

Eye Contact - May be an eye irritant.

Skin Contact - May cause skin irritation upon prolonged or repeated contact. Inhalation - Irritant to upper respiratory system. Can cause headache, nausea, and dizziness.

Ingestion - May be harmfull if swallowed Chronic Overexposure - Possible liver and kidney damage.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact - Flush eyes with large quantities of water for at least 15 minutes and seek immediate medical attention.

Skin Contact - Wash skin with soap and large quantities of water and seek medical attention if irritation from contact persists.

Inhalation - If breathing difficulties, dizziness, or lightheadedness occur when working in areas with high vapor concentrations, victim should seek air free of vapors. If victim experiences continued breathing difficulties, administer oxygen until medical assistance can be rendered. If breathing stops, begin artificial respiration and seek immediate medical attention. Ingestion - If swallowed, do not induce vomiting. Seek immediate medical advice and/or attention.

Soction V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
EFFECTS OF OVEREXPOSURE

Mineral Spirits (109-73-9)

Acute Overexposure - Can lead to central nervous system depression producing such effect as headache, dizziness, nausea, and loss of consciousness.

Eye Contact - Short term liquid or vapor contact may result in slight eye irritation. Prolonged and repeated contact may be more irritating.

Skin Contact - Prolonged and repeated liquid contact can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Inhalation - High concentrations or prolonged exposure to lower concentrations may be slightly irritating to mucous membranes.

Ingestion - Liquid ingestion may result in volmiting; aspiration (Breathing in) of liquid must be avoided as liquid contact with the lungs can result in chemical pneumonitis and pulmonary edema/hemorrage.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact- Flush with water. If persistent irritation occurs, get medical attention. Skin Contact - Wash with soap and water. Remove contaminated clothing and do not reuse until laundered. If persistent irritation occurs, get medical attention.

Inhalation - Remove to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

Ingestion - Do not induce vomiting even though vomiting may occur. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs. Get medical attention

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Soction VI — REACTIVITY DATA
STABLETY UNSTABLE X STABLE CONDITIONS TO AVOID DO NOT STORE above 120° F. Keep
HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous fumes when heated to decomposition. Fumes
may contain carbon dioxide and/or carbon monoxide.
CONDITIONS TO AVOID NA COURT WILL HOT OCCUR
Section VII — SPILL OR LEAK PROCEDURES
sters to be taken in case waterial is necessarily necessarily Remove all sources of ignition, avoid breathing
vapors, ventilate area. Wipe up with inert materials and place in appropriate container.
wasicowrosal without incinerate aerosol. Dispose of in accordance with local, state
and federal regulations. Do not place nerosol caus in home compactor. Do not puncture.
Section VIII — SPECIAL PROTECTION INFORMATION
http://kalonypholection Avoid continuous breathing of vapors and spray mist. A self contained breathing apparatus required for concentrations above TLV limits.
visitation Use with adequate ventilation, sufficient to prevent inhalation of solvent
vapors.
PROTECTIVE GLOVES Optional
(reconnection Only under conditions where spray mist might get into eyes.
Section IX — SPECIAL PRECAUTIONS

prolonged exposure to sun may cause bursting.

vincaphecautions Use only as directed. Intentional misuse by diliberately concentrating vapors and inhaling contents can be harmful or fatal.